



# ANNUAL REPORT

ON THE

## HEALTH

OF THE

### COUNTY BOROUGH OF CARDIFF

FOR THE YEAR 1891.

BY

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CARDIFF:

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1892.

COUNTY BOROUGH OF CARDIFF.

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# HEALTH AND PORT SANITARY COMMITTEE.

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# CARDIFF URBAN SANITARY AUTHORITY.

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TOWN HALL,

CARDIFF, MAY, 1892.

## *TO THE CHAIRMAN AND MEMBERS OF THE CARDIFF URBAN SANITARY AUTHORITY.*

GENTLEMEN,

I have the honour of submitting to you my report for the year 1891, and of laying before you the usual tables of vital statistics.

By a General Order of the Local Government Board, dated 23rd March, 1891, it is prescribed that every Medical Officer of Health shall—

“Make an Annual Report to the Sanitary Authority up to the end of December in each year, comprising a summary of the action taken, or which he has advised the Sanitary Authority to take, during the year for preventing the spread of disease, and an account of the sanitary state of his district generally at the end of the year.

“The report shall also contain an account of the inquiries which he has made as to conditions injurious to health existing in the district, and of the proceedings in which he has taken part or advised under any statute, so far as such proceedings relate to those conditions.

“Also an account of the supervision exercised by him or on his advice, for sanitary purposes, over places and houses that the Sanitary Authority have power to regulate, with the nature and results of any proceedings which may have been so required and taken in respect of the same during the year.

“The report shall also record the action taken by him or on his advice during the year, in regard to offensive trades, to dairies, cowsheds, and milkshops, and to factories and workshops.

“The report shall also contain tabular statements of the sickness and mortality within the district, classified according to diseases, ages and localities.”

This report is therefore made in accordance with the above regulations.

The population of the County Borough of Cardiff, as enumerated at the recent census in April last, was 128,849, being an increase of 46,088, or 55·7 per cent. since the census in 1881.

The population of the borough in the middle of the year 1891, as estimated by the Registrar General on the basis of the recent enumeration, was 130,283, or 8,806 above the estimate for the same period based on the enumerated population of the census of 1881. In previous reports it was pointed out that the populations of the large towns in England and Wales were estimated for the middle of each year since 1881 on the hypothesis that the rate of increase in the period 1871—81 had been maintained since that date, and it was shown that this method, when applied to a rapidly-increasing town like Cardiff, gave an incorrect result, and

that the accuracy of the vital statistics contained in these reports diminished as the interval from the preceding census increased in consequence of the increasing uncertainty as to the population upon which these calculations were based. It was anticipated therefore that the results of the census would show a population in excess of the official estimate.

From the report of the census made on April 6th last it appears that the total population of the United Kingdom consisted of 37,740,283 persons. This was an increase of 2,855,435 upon the enumerated population in 1881, and was equivalent to an increase of 8·2 per cent. This rate was lower than in either of the two next preceding decennial periods in which it had been successively 8·8 and 10·8 per cent. The falling off in the rate of growth was shared by all the divisions of the kingdom, but unequally, the smallest decline being in Wales, where the increase was only very slightly lower than it had been in the previous decennium, falling merely from 11·8 to 11·6 per cent.

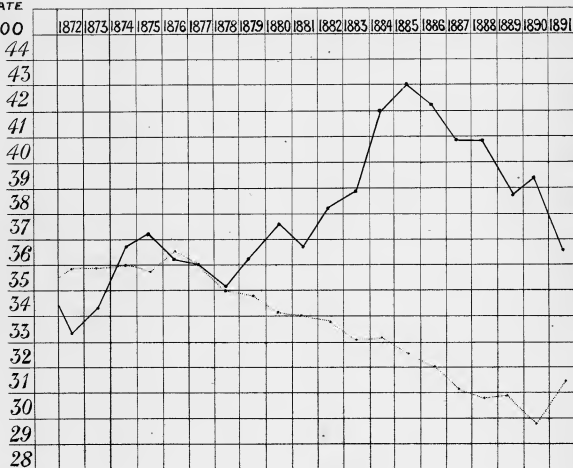
The increase in the population of the 28 largest towns in England and Wales since 1881 was at the rate of 11·2 per cent. as compared with 17·7 per cent. in the preceding decennium. This rate differed considerably in different towns, ranging from 7·1 in Birmingham and Bristol to 55·7 per cent. in Cardiff. With one exception there was some amount of increase in all the towns. This exception was Liverpool, in which city there was a decline of 6·3 per cent., due doubtless to the fact that the area within the municipal boundary has become too valuable for ordinary residence, and that business premises have taken the place of dwelling houses.

The following table shows the population of 28 of the largest English towns, as enumerated at the last census, and the increase in each case since 1881.

Chart shewing the Birth-rate of England and Wales compared with that of Cardiff during the twenty years 1872-1891.

BIRTH-RATE

PER 1000



CARDIFF —————

ENGLAND AND WALES .....>

TABLE IV. shows the population, the births, deaths, excess of deaths over births, and excess of births over deaths annually.

TABLE IV.

Year..	Population.	Births.	Deaths.	Excess of Deaths over Births.	Excess of Births over Deaths.
1845	13,385	320	324	4	...
1846	14,212	381	321	...	60
1847	15,039	331	484	153	...
1848	15,866	428	579	151	...
1849	16,693	466	864	395	...
1850	17,520	504	485	...	19
1851	18,354	575	585	...	50
1852	19,724	696	620	...	76
1853	21,094	865	644	...	221
1854	22,464	950	925	...	25
1855	23,834	1,079	641	...	438
1856	25,204	1,227	772	...	455
1857	26,574	1,367	883	...	484
1858	27,944	1,356	753	...	603
1859	29,314	1,336	826	...	510
1860	30,684	1,346	662	...	584
1861	32,054	1,223	837	...	386
1862	32,804	1,267	695	...	373
1863	33,552	1,302	862	...	440
1864	34,300	1,369	932	...	467
1865	35,048	1,382	867	...	515
1866	35,796	1,331	882	...	449
1867	36,544	1,397	873	...	524
1868	37,292	1,387	843	...	544
1869	38,640	1,414	1,005	...	409
1870	38,788	1,406	903	...	503
1871	59,494	1,391	891	...	500
1872	62,086	1,358	916	...	442
1873	64,674	1,430	995	...	435
1874	67,262	1,550	885	...	665
1875	69,850	2,716	1,547	...	1,169
1876	72,438	2,707	1,455	...	1,252
1877	75,026	2,772	1,475	...	1,297
1878	77,614	2,795	1,468	...	1,327
1879	80,202	2,969	1,428	...	1,541
1880	82,790	2,893	1,634	...	1,295
1881	85,378	3,145	1,556	...	1,598
1882	88,603	3,399	1,724	...	1,675
	95,168				
1883	91,204	3,526	1,807	...	1,719
	97,767				
1884	93,468	3,920	2,250	...	1,670
	100,033				
1885	97,034	4,164	2,487	...	1,683
	103,599				
1886	100,736	4,270	2,269	...	2,001
	107,301				
1887	104,580	4,277	2,280	...	1,997
	111,145				
1888	108,570	4,409	2,212	...	2,197
	115,135				
1889	112,712	4,361	2,190	...	2,172
	126,801				
1890	117,012	4,600	2,469	...	2,131
	131,638				
1891	130,283	4,739	2,873	...	1,866

## DEATHS.

During the year 1891, 2873 deaths were registered in the Borough of Cardiff; of these 1566 were males and 1307 were females.

The death-rate was equal to 22·05 per 1,000, calculated on the population as estimated by the Registrar General at the middle of the year. The rate in England and Wales in 1891 was 20·2, and in the 28 large towns 22·5 per 1,000 persons living, against 20·1, 20·3, and 22·6 in the preceding three years 1888-89-90. The excess in the rate of mortality in 1890 and 1891 was due to the epidemic of Influenza which prevailed during both these years. In the large towns the death rate last year ranged from 18·2 in Brighton, 19·0 in Portsmouth, 19·1 in Derby, and 19·3 in Norwich to 26·0 in Salford, 26·5 in Manchester, 27·0 in Liverpool, and 27·3 in Preston.

During the first quarter of the year 747 deaths were registered in Cardiff, corresponding to an annual rate of 24·5 per 1,000, as compared with 23·2 the average rate in the first quarter of the five preceding years, and with 23·0 the average rate in the 28 large towns. The deaths from the chief Zymotic diseases during the first quarter were 34, corresponding to an annual death-rate of 1·1 per 1,000, as compared with 1·7 the average rate in the same quarter of the five preceding years, and with 2·1 the average rate in the 28 large towns.

In these towns the rate varied from 0·78 in Derby, 0·90 in Wolverhampton and 0·93 in Hull, to 3·07 in Leicester, 3·09 in Manchester, 3·53 in Bristol, 3·70 in Preston, 4·03 in Salford, 4·48 in Huddersfield, 4·64 in Halifax, and 5·10 in Blackburn. The high rate of mortality in the first quarter was due to excessive fatality from diseases of the respiratory organs amongst the very young and very old, and those whose health was impaired from other causes; it was associated with unusually cold and severe weather. The death-rate from inflammation of the lungs was 4·31 per 1,000 as compared with 1·95 and with 2·73, the rates in the corresponding quarters of 1889 and 1890.

During the quarter ending July 4th, 741 deaths were registered, corresponding to a death-rate of 22·8 per 1,000 as compared with 16·8, the rate in the second quarter of 1890, and with 18·8 the average rate in the corresponding quarters of the five preceding years, and with 26·2 the mean rate in the second quarter in the 28 large towns.

In England and Wales the deaths during this quarter were equal to an annual death-rate of 23·7 per 1,000, a rate which exceeded by 27 per cent. the average in the corresponding periods of the 10 years, 1881-90. Amongst the large towns the rates varied from 18·2 in Brighton, 20·1 in Norwich, and 20·4 in Bristol, to 31·8 in Liverpool, 33·7 in Manchester, and 34·0 in Sheffield. The deaths from the seven chief Zymotic diseases during the second quarter in Cardiff were 47, being equal to an annual death-rate of 1·43 per 1,000, as compared with 1·82 the average rate in the second quarters of the five preceding years, and with 2·1 the rate in the 28 large towns varying from 0·45 in Brighton and 0·60 in Birkenhead, to 3·46 in Leicester and 4·23 in Portsmouth.

In the third quarter 540 deaths were registered in Cardiff, corresponding to an annual death-rate of 16·5 per 1,000, as compared with 20·4 the average rate in

the third quarters of the five preceding years, and with 18·1 the rate in the 28 large towns. In these towns the rates varied from 14·2 in Brighton and Bristol, to 24·1 in Sunderland and 26·7 in Preston. The deaths from the seven chief Zymotic diseases were 68, being equal to an annual death-rate of 2·08 per 1,000, as compared with 4·05 the average rate in the third quarters of the five preceding years and with 2·87 the rate in the large towns. Diarrhoea, which usually proves so fatal in the summer, caused only 27 deaths, a smaller number than in any preceding third quarter since 1881. The diarrhoeal death-rate was 0·82 per 1,000, and considerably less than half the average in the corresponding period of the preceding ten years. The low mortality from this disease was undoubtedly due to unusually cold and wet weather which prevailed during July and August.

The number of deaths registered during the fourth quarter of the year was 845, being in the proportion of 25·9 deaths annually per 1,000 persons living, compared with 21·7 the mean rate in the fourth quarters of the preceding five years, and with 21·2 the rate in the 28 large towns.

The lowest rates in these towns were 16·1 in Huddersfield and 16·4 in Leicester and Portsmouth, while the highest were 28·2 in Wolverhampton, 28·8 in Newcastle-on-Tyne, and 28·9 in Sunderland. The 124 deaths ascribed to these diseases corresponded to an annual rate of 3·7 per 1,000, against 2·8 the mean rate in the fourth quarter of the preceding five years, and with 2·4 the average rate in the large towns.

The rate varied from 0·8 in Brighton and Halifax, to 3·9 in Cardiff, 4·4 in Sunderland, and 4·5 in Newcastle-on-Tyne. The high rate of mortality in Cardiff during the past year was to a great extent due to the epidemic prevalence of Influenza. The effect on the death-rate was most marked during the spring and winter months. The rate of mortality in the first and second quarters of the year was above the average, this excess was caused by prevalence of pneumonia and bronchitis. The annual death-rates from pneumonia during the first and second quarters of the year were 4·31 and 3·83 respectively per 1,000 persons living, rates very considerably above the average.

In the earlier part of the year this increased mortality was to some extent due to the low temperature which then prevailed, but from the appearance of Influenza in the month of April and from its subsequent prevalence in an epidemic form, it may be inferred that this disease influenced the mortality during the greater part of the first half of the year, although no deaths were registered as directly due to this cause until the early part of May.

During the previous epidemic in 1890, as well as in that of the present year, it has been noticed that pneumonia of an aggravated type formed one of the most dangerous complications of the disease. In the latter part of the year again there was an increased mortality from diseases of the respiratory organs, and also amongst the class of specific febrile diseases. Of the 164 deaths ascribed to this latter class 30 were attributed to Influenza. The deaths from this disease, which were 3 in October and 6 in November, increased to 21 in December, and concomitantly with this rise in the mortality due directly to the epidemic of Influenza, there was also a considerable rise in the mortality from other diseases, especially from Pneumonia and Bronchitis, the deaths from these diseases increasing from 37 in October to 80 in November, and to 100 in December. As this increase was not caused by any unusual severity in the weather, we may assume, with much probability, that it was largely determined by the epidemic Influenza.



The following table gives the number of deaths from Influenza, Pueumonia, and Bronchitis during each quarter in the years 1890 and 1891 :—

TABLE V.

1890.					1891.				
	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.		1st Qr.	2nd Qr.	3rd Qr.	4th Qr.
Influenza	11	0	0	1	Influenza	1	35	12	30
Pueumonia	80	46	38	76	Pueumonia	131	125	43	84
Bronchitis	75	29	37	65	Bronchitis	112	72	35	133

The following table gives the annual death-rate per 1,000 of the 28 large Towns in England for the years 1885—1891 inclusive.

TABLE VI.

Death-rate of the large English Towns during the past seven years.

28 LARGE TOWNS.		Annual Death-rate per 1,000 living.						
		1885.	1886.	1887.	1888.	1889.	1890.	1891
London	....	19·7	19·9	19·6	18·5	17·4	20·3	21·4
Brighton	....	17·1	17 1	16·9	16·1	15·1	17·8	18·2
Portsmouth	....	19·7	23·8	19·5	18·7	18·1	19·6	19·0
Norwich	...	20·3	23·3	20·4	20·2	18·3	21·1	19·3
Plymouth	....	22·3	23·5	22·7	22·3	25·2	22·4	22·5
Bristol	....	19·7	19·3	20·4	16·9	17·6	19·2	20·9
Wolverhampton	....	20·2	22·2	21·7	20·7	20·6	21·8	24·2
Birmingham	....	19·3	19·9	19·7	17·8	18·7	20·7	22·2
Leicester	....	19·4	19·6	19·0	18·3	16·9	17·9	21·7
Nottingham	...	19·9	20·4	18·7	17·3	17·0	16·5	19·9
Derby	....	18·1	18·2	17·1	16·3	16·3	18·5	19·1
Birkenhead	....	19·5	19·1	21·0	17·8	17·8	19·7	20·9
Liverpool	....	23·8	23·8	23·7	20·3	21·5	23·6	27·0
Bolton	....	20·8	23·1	21·3	21·6	22·0	25·8	21·9
Manchester	...	26·5	26·3	28·7	26·1	26·7	30·6	26·5
Salford	....	21·1	22·1	22·2	21·1	20·4	22·4	26·0
Oldham	....	22·0	22·8	23·8	20·3	20·4	21·2	25·7
Blackburn	....	21·8	25·5	25·5	23·9	25·4	23·5	25·8
Preston	....	27·1	28·9	27·9	23·9	30·0	27·4	27·3
Huddersfield	....	20·1	19·6	23·0	18·5	18·8	19·0	23·0
Halifax	....	19·7	22·7	21·0	19·1	21·5	22·5	22·8
Bradford	....	17·7	19·2	19·9	17·1	19·1	20·4	22·2
Leeds	....	19·9	21·9	21·1	20·6	22·0	22·6	22·9
Sheffield	....	20·7	19·8	21·6	20·5	20·8	24·9	23·9
Hull	....	17·2	18·8	19·3	16·4	20·2	19·2	21·0
Sunderland	....	23·8	19·5	19·7	18·1	22·8	22·7	25·0
Newcastle-on-Tyne	....	26·1	22·2	25·3	20·5	25·1	25·9	23·8
<b>Cardiff</b>	....	<b>25·7</b>	<b>22·6</b>	<b>21·9</b>	<b>20·3</b>	<b>19·4</b>	<b>21·1</b>	<b>22·0</b>
28 Large Towns		20·5	20·9	20·8	19·2	19·3	21·3	22·5

TABLE VII

Birth-rate, Death-rate, and Analysis of the Zymotic Death-rate in 28 of the largest English Towns for the year 1891.

Name of Town.	Population.	Birth-rate.	Death-rate.	ZYMOTIC DEATH-RATE.								Deaths under 1 year to 1,000 births.
				Small-pox.	Measles	Scarlet Fever.	Diphtheria.	Whooping Cough	Fever.	Diarrhoea.	Total.	
London .....	4,221,452	31.8	21.4	0.001	0.43	0.14	0.32	0.68	0.14	0.57	2.12	154
Brighton .....	115,606	26.3	18.2	—	0.25	0.008	0.10	0.18	0.11	0.38	1.04	137
Portsmouth .....	160,128	30.1	19.0	—	1.36	0.06	0.14	0.22	0.21	0.48	2.50	139
Norwich .....	101,316	31.9	19.3	—	0.40	0.06	0.26	0.28	0.19	0.54	1.76	159
Plymouth .....	84,464	29.8	22.5	—	0.33	0.18	0.07	0.81	0.16	0.74	2.32	178
Bristol .....	222,049	30.4	20.9	—	1.08	0.16	0.05	0.23	0.10	0.29	1.95	146
Wolverhampton .....	82,799	34.2	24.2	—	0.30	0.16	0.04	0.30	0.22	1.17	2.22	190
Birmingham .....	429,906	34.2	22.2	0.01	0.24	0.21	0.08	0.65	0.17	0.75	2.13	171
Leicester .....	142,581	33.9	21.7	—	0.58	0.11	0.09	0.94	0.23	1.43	3.41	214
Nottingham .....	212,662	29.9	19.9	—	0.50	0.14	0.07	0.57	0.33	0.62	2.25	169
Derby .....	94,496	30.6	19.1	—	0.27	0.09	0.19	0.40	0.12	0.34	1.43	142
Birkenhead .....	99,597	33.0	20.9	—	0.34	0.06	0.11	0.31	0.47	0.41	1.70	148
Liverpool .....	517,116	34.6	27.0	0.003	0.61	0.22	0.12	0.84	0.24	0.65	2.72	188
Bolton .....	115,253	34.1	21.9	—	0.47	0.19	0.09	0.38	0.30	0.91	2.36	165
Manchester .....	506,469	34.1	26.5	—	0.43	0.22	0.23	1.02	0.39	0.80	3.12	192
Salford .....	198,717	36.4	26.0	—	0.65	0.18	0.33	0.92	0.39	0.90	3.45	194
Oldham .....	132,010	31.1	25.7	—	0.74	0.18	0.13	0.52	0.20	0.42	2.22	192
Blackburn .....	120,496	33.9	25.8	—	1.47	0.09	—	0.48	0.19	1.14	3.42	204
Preston .....	107,864	36.0	27.3	—	0.78	0.27	0.13	0.29	0.30	1.94	3.75	227
Huddersfield .....	95,656	24.4	23.0	—	1.11	0.33	0.07	0.61	0.16	0.14	2.49	185
Halifax .....	83,109	26.2	22.8	—	0.51	0.44	0.02	0.72	0.25	0.09	2.12	169
Bradford .....	216,938	28.7	22.2	—	0.37	0.65	0.07	0.64	0.15	0.51	2.43	181
Leeds .....	369,099	34.1	22.9	0.002	0.70	0.17	0.04	0.40	0.19	0.86	2.40	177
Sheffield .....	325,304	36.6	23.9	—	0.53	0.34	0.13	0.67	0.23	0.73	2.65	170
Hull .....	200,934	34.6	21.0	—	0.39	0.09	0.06	0.16	0.21	0.76	1.71	172
Sunderland .....	131,302	37.8	25.0	—	1.14	0.18	0.07	0.32	0.40	1.04	3.17	176
Newcastle .....	187,502	35.8	23.8	—	0.69	0.21	0.21	0.98	0.14	0.47	2.74	174
Cardiff .....	130,283	36.5	22.0	—	0.40	0.25	0.13	0.67	0.18	0.43	2.08	153

Table VIII. gives the population of each year, the annual deaths from all causes, from the seven chief zymotic diseases, and the death-rates from 1845 to 1891 inclusive:—

TABLE VIII.

Year.	Population	All Causes.			Seven Chief Zymotic Diseases.		
		No. of Deaths.	Death Rates per 1,000.	Mean of 10 years.	No. of Deaths.	Death Rates per 1000.	Mean of 10 years.
1845	13,385	324	24.2		51	3.8	
1846	14,212	321	22.6		50	3.5	
1847	15,039	484	32.2		133	8.8	
1848	15,856	579	36.5		186	11.7	
1849	16,693	864	51.7		483	28.9	
1850	17,520	485	27.7		116	6.6	
1851	18,354	525	28.6		81	4.4	
1852	19,724	620	31.4		175	8.8	
1853	21,094	644	30.5		129	6.1	
1854	22,464	925	41.1	32.7	353	15.7	9.8
1855	23,834	641	26.9		665	2.7	
1856	25,204	772	30.6		136	5.3	
1857	26,574	883	33.2		234	8.8	
1858	27,944	753	26.9		128	4.5	
1859	29,314	826	28.1		212	7.2	
1860	30,684	662	21.5		95	3.0	
1861	32,054	837	26.1		100	3.1	
1862	32,804	695	21.2		132	4.0	
1863	33,552	862	25.7		268	7.0	
1864	34,300	932	27.1	26.7	250	7.3	5.4
1865	35,048	867	24.7		161	4.5	
1866	35,796	882	24.6		192	5.3	
1867	36,544	873	23.8		116	3.1	
1868	37,292	843	22.6		109	2.9	
1869	38,040	1,005	26.4		156	4.1	
1870	38,788	903	23.2		133	3.4	
1871	59,494	891	22.5		158	3.9	
1872	62,086	916	22.7		234	5.8	
1873	64,674	995	24.2		103	2.5	
1874	67,262	885	21.2	23.6	154	3.6	3.9
1875	69,850	1,547	22.1		294	4.2	
1876	72,438	1,455	20.8		339	4.6	
1877	75,026	1,475	19.6		255	3.5	
1878	77,614	1,468	18.9		197	2.5	
1879	80,202	1,428	17.6		137	1.7	
1880	82,790	1,634	19.7		306	3.7	
1881	85,378	1,556	18.2		164	1.9	
1882	88,603	1,724	19.4		293	3.3	
1883	91,204	1,807	19.8		253	2.7	
1884	93,468	2,250	24.3	20.0	476	5.0	3.3
1885	97,034	2,481	25.5		521	5.3	
1886	100,736	2,269	22.5		532	3.2	
1887	104,580	2,280	21.8		278	2.6	
1888	108,570	2,212	20.3		324	2.9	
1889	112,712	2,190	19.4		248	2.1	
1890	117,012	2,469	21.1		282	2.4	
1891	130,283	2,873	22.0		272	2.1	

Chart shewing the number of Deaths from all causes, and from the chief Zymotic Diseases during each week in the year 1891.

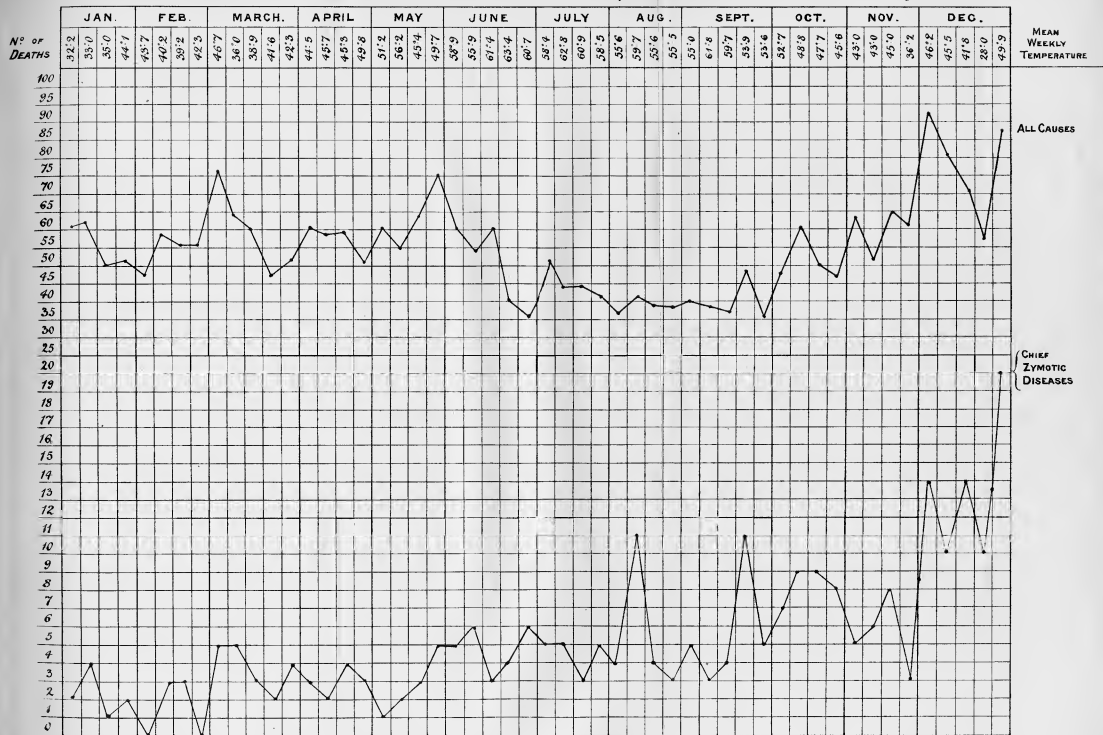


TABLE IX.

No.	Week ending.		No. of Deaths.	Death-rate estimated Population (130,283.)
1	January	10	62	24.8
2	"	17	63	25.2
3	"	24	50	20.0
4	"	31	53	22.2
5	February	7	48	19.2
6	"	14	59	23.6
7	"	21	56	22.4
8	"	28	56	22.4
9	March	7	77	30.8
10	"	14	64	25.6
11	"	21	60	24.0
12	"	28	46	18.4
13	April	4	53	22.2
14	"	11	62	24.8
15	"	18	58	23.2
16	"	25	59	23.6
17	May	2	52	20.8
18	"	9	61	24.4
19	"	16	55	22.0
20	"	23	64	25.6
21	"	30	76	30.4
22	June	6	62	24.8
23	"	13	54	21.6
24	"	20	61	24.4
25	"	27	40	16.0
26	July	4	37	14.8
27	"	11	51	20.4
28	"	18	48	19.2
29	"	25	48	19.2
30	August	1	43	17.2
31	"	8	36	14.4
32	"	15	42	16.8
33	"	22	38	15.2
34	"	29	37	14.8
35	September	5	40	16.0
36	"	12	37	14.8
37	"	19	35	14.0
38	"	26	49	19.6
39	October	3	36	14.4
40	"	10	48	19.2
41	"	17	61	24.4
42	"	24	53	22.2
43	"	31	48	19.2
44	November	7	64	25.6
45	"	14	53	22.2
46	"	21	65	26.0
47	"	28	62	24.8
48	December	5	94	37.6
49	"	12	82	32.8
50	"	19	72	28.8
51	"	26	56	22.4
52	January	2	87	34.8

TABLE X.—STATISTICS OF WARDS.

WARDS.	Estimated Population.	Total Deaths.	ANNUAL DEATH-RATE PER 1,000.											
			All Causes.	Seven chief Zymotic Diseases.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Typhoid Fever.	Diarrhoea.	Phthisis.	Diseases of Respiratory Organs.	Tuberculosis.
Central Ward	14,037	320	22.7	1.70	...	0.42	0.07	...	0.71	0.21	0.28	2.13	6.12	0.14
South „	10,418	270	25.9	2.59	...	0.09	0.28	0.57	0.67	0.47	0.47	1.91	7.48	0.09
Cathays „	15,050	266	17.6	3.32	...	1.39	0.66	0.19	0.46	0.13	0.46	1.19	5.24	...
Park „	15,453	232	15.0	1.16	...	0.25	0.06	0.06	0.25	0.12	0.38	1.29	3.10	0.06
Adamsdown „	13,437	396	29.4	1.86	...	0.07	0.59	0.14	0.44	0.26	0.29	1.93	7.66	0.14
Riverside „	15,143	522	34.4	2.04	...	0.33	0.19	0.19	0.79	0.06	0.06	5.41	9.77	0.59
Canton „	14,143	227	16.0	2.33	...	0.77	0.35	...	0.63	0.07	0.07	1.06	4.73	0.49
Roath „	12,593	217	17.2	1.50	...	0.23	0.07	...	0.87	0.15	0.15	0.71	4.44	0.07
Grangetown „	10,562	242	22.9	2.46	...	0.18	0.09	...	1.13	0.09	0.09	0.66	7.29	0.09
Splott „	7,607	181	23.7	2.62	...	0.13	0.26	0.13	1.44	0.65	0.65	1.57	5.91	0.13

**INFANT MORTALITY.**—The rate of infant mortality as measured by the proportion of deaths of infants under 1 year to 1,000 births registered, was 148. This rate in Cardiff, has of late years steadily declined, and now compares favourably with that of other large towns. In 1885, there were twenty-five towns with a lower rate of infant mortality than Cardiff: in 1886 there were eleven, in 1887 twelve, in 1888 five, 1889 five, in 1890 eight, and 1891 four. The death-rate of infants has usually been regarded as one of the most sensitive and reliable tests of the sanitary condition of a district. According to Sir J. Simon, the wide differences of infantile death-rate which are to be found in different districts of England, are due to the varying prevalence of two local causes:—First, to differences of degree in common Sanitary defects, some places abounding more than others in the foul air and foul water of undrained, unpaved, unscavenged, unwashed, unlighted, unventilated localities and houses; and secondly, to occupational differences among the inhabitants, there being certain large towns where women are greatly engaged in branches of industry away from home when consequently the home is ill kept, where the children are little looked after, and where infants who should be at the breast are improperly fed or starved, or have their cries of hunger and distress quieted by those various fatal opiates which are in such request at the centres of our manufacturing industries. To a great extent, therefore, the causes which operate in the production of a high rate of infant mortality are those which Sanitary Authorities are specially empowered to counteract. The most common causes of death amongst infants are the ordinary infectious diseases of childhood, diseases of the nervous system, diarrhoeal and pulmonary disorders. Table XI gives the infant mortality in Cardiff as compared with that of the large towns during the years 1885—1891 inclusive; and Table XII shows the chief causes of death amongst infants under one year of age. The deaths at this age which amounted to 694, comprised 24 per cent of the total deaths.

TABLE XI.

28 LARGE TOWNS.	Deaths under 1 year to 1,000 births registered.						
	1885	1886	1887	1888	1889	1890	1891
London	148	159	158	146	141	163	154
Brighton	131	160	149	148	131	164	137
Portsmouth	131	174	143	134	139	135	139
Norwich	136	202	158	165	164	180	159
Plymouth	156	154	196	164	166	161	178
Bristol	152	149	149	123	146	150	146
Wolverhampton	140	175	176	168	181	175	190
Birmingham	157	175	176	149	170	183	171
Leicester	193	216	215	203	208	195	214
Nottingham	157	180	170	151	182	159	169
Derby	137	150	142	143	149	157	142
Birkenhead	137	162	156	152	170	166	148
Liverpool	174	188	186	168	188	195	188
Bolton	160	186	171	173	166	176	165
Manchester	175	183	191	177	176	187	192
Salford	174	198	195	184	182	199	194
Oldham	166	174	187	150	178	180	202
Blackburn	170	209	201	189	203	188	204
Preston	218	233	214	188	265	241	227
Huddersfield	157	167	181	157	167	168	185
Halifax	132	171	153	154	175	170	169
Bradford	143	167	178	154	183	169	181
Leeds	155	181	172	173	177	172	177
Sheffield	164	168	177	178	174	195	170
Hull	128	164	165	139	184	160	172
Sunderland	158	151	151	132	181	173	176
Newcastle	172	155	174	136	174	169	174
Cardiff	189	168	172	143	157	165	148

TABLE XII.

Chief causes of death under one year of age.

Causes of Death.		Number of Deaths under One Year of Age.
Premature Birth	....	67
Congenital Defects	....	7
Measles	....	14
Whooping Cough	....	39
Diseases of the Respiratory System		162
„ „ Nervous System	....	102
„ „ Digestive System	....	54
Diarrhoea	....	42
Tabes Mesenterica	....	17
Tubercular Meningitis	....	19
Other Tuberculous Diseases	....	7
Violence	....	13
Other Diseases	....	151

ZYMOTIC DISEASES.—The 2873 deaths from all causes included :—

55	....	attributed to Measles	26	....	attributed to Fever
52	....	Diarrhoea	16	...	Diphtheria
89	....	Whooping Cough	0	....	Small Pox
35	....	Scarlet Fever			

The 273 deaths ascribed to these diseases correspond to an annual rate of 2.09 per 1,000 living, as compared with 3.15 the average rate in the six preceding years, and with 2.42 the rate in the 28 large towns. The rate varied from 1.04 in Brighton, 1.43 in Derby, and 1.70 in Birkenhead, to 3.42 in Blackburn, 3.45 in Salford, and 3.75 in Preston.

The number of deaths from the chief Zymotic diseases during each month in the year is given in Table XIII; which also shows the number of cases of each disease reported to me under the provisions of the Infectious Diseases (Notification) Act. This Act was adopted in December, 1889. It enacts that householders and medical men in attendance shall notify to the Medical Officer of Health, all cases of the following diseases, *i.e.* Small Pox, Cholera, Diphtheria, Membranous Croup, Erysipelas, Scarlet Fever, Enteric, Typhus and Puerperal Fevers. A fee of 2/6 is paid for each case in private practice, and 1/- in respect of patients being inmates of public institutions. The number of cases of Infectious Diseases notified during the year was 957, being 348 in excess of that recorded in the preceding year. This excess was due to the prevalence of Scarlet Fever, the notifications from which disease more than doubled in number those which were received in 1890. The total amount paid for notification was £121 17s. 6d. The experience of the two preceding years during which the Act has been in force, enables me to report favourably upon the working of this system of notification. The method now adopted, gives I believe general satisfaction, and owing to the co-operation of the Medical men practising in the district it works smoothly and without any friction. There can be no doubt that when proper provision has been made for the isolation of patients in a suitable hospital, this system of notification will prove a most valuable means of arresting the spread of Zymotic diseases in the Borough. Even without this provision there are certain obvious advantages to be obtained by its adoption. In cases of Small-pox, early notification allows time for successful vaccination of exposed persons, the attendance at school of children from infected houses can be more readily controlled, the inspection of premises frequently leads to the discovery and removal of sanitary defects and of other conditions likely to spread disease, the work of disinfection is very largely increased, and the investigation of the cause of outbreaks of diseases is greatly facilitated. With a view of obtaining a record of the particulars connected with each case notified under the Act, the following plan is adopted.

The premises are visited with as little delay as possible, and enquiries are made respecting the history of the case and the necessary steps taken for limiting the spread of the disease. In each case report sheets are filled up, of which the subjoined are samples :—

---

ENTERIC, OR TYPHOID FEVER.

---

Dates of enquiry.

Notified by.

Name, Age, and Occupation of Patient.

Residence.

Whence is the supply of Water derived ?

Whence is the supply of Milk derived ?

The Washing and Mangling, where and by whom done ?

Name and Residence of any Visitor from where Disease exists.



Date of First Symptoms.

Sanitary condition of Dwelling and immediate neighbourhood,  
probable origin of Disease.

Date and Address of any recent case in same Street.

## SCARLET FEVER.

Date of enquiry.	Has Child, within one week been to School, Church or other Assembly, or visited any infected house, if so, when and where?
Notified by.	Date and address of any recent case in same Street.
Name, Age, and Occupation of Patient.	The Washing and Mangling where and by whom done?
Residence.	Whence is the supply of Milk?
Date of First Symptoms?	Sanitary condition of Dwelling, remarks and probable origin of Disease

From these sheets the most important particulars are copied into a register, each particular disease having its own book. From this register it is easy at a glance to ascertain any factor common to several cases and to trace the relation of the disease to the particular locality in which it occurs. This systematic register is valuable in proportion to its completeness and it is necessary continually to impress upon the Inspectors who visit the houses the importance of practising the greatest exactness and caution. Printed instructions in the following form are left at the infected houses.

## PRECAUTIONS TO BE OBSERVED IN CASES OF INFECTIOUS DISEASE.

*The expression "Infectious Disease" means any one of the following Diseases:—Small-pox, Scarlet Fever, Typhoid Fever, Typhus Fever, Measels and Diphtheria,*

1. Where Scarlet Fever, Diphtheria, or Small-pox exists in a house, no child should attend school from the house for a period of at least six weeks after the occurrence of the last case, and in the case of Measels the period should not be less than three to four weeks.
2. The patient should be isolated by being placed, if possible, in a well ventilated room at the top of the house, all carpets, curtains, and unnecessary furniture should be removed from the room.
3. A sheet should be hung up outside the door of the sick room, and kept wet with a solution of carbolic acid,  $\frac{1}{2}$ -pint to a gallon of water, or with some other recognised disinfectant.
4. All bed and body linen as soon as removed from the sick person, and before being taken from the sick room, should be first put into a solution of carbolic acid of the above named strength, or into some other disinfectant, remaining there for an hour, and afterwards boiled in water.
5. All discharges from the patient, especially if the disease be small pox, scarlet fever, or typhoid fever, should be received into vessels containing some suitable disinfectant, and should be removed from the sick room and disposed of without delay.
6. If the disease is small pox any unvaccinated infant in the house should at once be vaccinated, and all adults or young persons over twelve years of age should be re-vaccinated.
7. The patient cannot be pronounced absolutely free from conveying infection until all peeling has entirely ceased in scarlet fever, and until the crusts and scales have been removed in small-pox, and the whole of the body has been well bathed. In all cases of infectious disease the patient should have one or more warm baths before putting on clean clothes.

8. The sick room should not be visited by any but those in attendance on the patient, as the clothing of visitors is very liable to convey infection.
9. In case of death the body should be completely enveloped in a sheet steeped in a strong solution of carbolic acid ( 1 pint to a gallon of water) placed in a coffin with a pound or two of carbolic acid powder sprinkled over it, fastened down and buried without delay.
10. On the termination of the case, the sick room, the clothing, and everything with which the patient has come in contact, must be thoroughly disinfected, notice should be sent to the Medical Officer of Health, who will send an Inspector to superintend the process of disinfection.
11. Infected clothing, bedding, and other articles must be given to the Inspector, who will cause them to be removed to the public disinfecting apparatus, where they will be disinfected free of charge, after which they should be thoroughly washed at home. Infected clothing should not on any account or under any pretence whatever be sent to the laundress, and if clothes are received to wash they should not be received until the house is pronounced free from infection.
12. Books obtained from the Free Library should be returned to the Inspector of Nuisances, at the **Town Hall**.

*Your attention is particularly directed to the following provisions of the Public Health Act, and of the Infectious Disease (Prevention) Act, so far as they relate to the prevention of the spread of Infectious Diseases :—*

Any person who :—

- (1) While suffering from any dangerous infectious disease wilfully exposes himself without proper precaution against spreading the said disorder in any street, public place, or vehicle, or enters any public conveyance without previously notifying to the driver that he is so suffering.
- (2) Being in charge of any person so suffering, so exposes such sufferer, or
- (3) Gives, lends, sells, or transmits, or exposes without previous disinfection any bedding clothing, rags, or other things which have been exposed to infection, shall be liable to a penalty not exceeding Five Pounds.

Every person who shall cease to occupy any house, room, or part of a house, in which any person has, within six weeks previously, been suffering from any infectious disease without having such house, room, or part of a house, and all articles therein liable to retain infection disinfected to the satisfaction of a registered medical practitioner, as testified by a certificate signed by him, or without first giving to the owner of such house, room, or part of a house, notice of the previous existence of such a disease, and every person ceasing to occupy any house, room, or part of a house, and who on being questioned by the owner thereof, or by any person negotiating for the hire of such house, room, or part of a house, as to the act of there having within six weeks previously been therein any person suffering from any infectious disease, knowingly makes a false answer to such questions shall be liable to a penalty not exceeding Ten Pounds.

Any person who shall knowingly cast, or cause, or permit to be cast into any ash-pit, ash-tub, or other receptacle for the deposit of refuse, any infectious rubbish without previous disinfection, shall be guilty of an offence under this Act.

Any Local Authority or the Medical Officer of any Local Authority generally empowered by the Authority in that behalf, may, by notice in writing require the owner of any bedding, clothing, or other articles which have been exposed to the infection of any infectious disease, to cause the same to be delivered over to an Officer of the Local Authority for removal for the purpose of disinfection, and any person who fails to comply with such requirement, shall be liable to a penalty not exceeding Ten Pounds.

Shewing the number of cases of infectious diseases reported under the Notification Act, and the deaths during each month in the year, 1891.

Month.	Small Pox.		Cholera.		Diphtheria.		Croup.		Erysipelas.		Scarlet Fever.		Typhoid Fever.		Typhus Fever.		Puerperal Fever.		Relapsing Fever.	
	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.
January ...	...	2	...	...	...	3	...	...	...	6	...	31	...	11	...	...	...	1	...	...
February ...	...	3	...	...	...	8	...	...	...	1	1	20	4	13	...	...	...	1	...	...
March ...	...	2	...	...	3	5	...	...	...	3	...	20	2	8	2	...	...	1	...	1
April ...	...	...	...	...	3	10	...	...	2	7	...	23	1	6	...	...	...	...	...	...
May ...	...	...	...	...	3	5	2	...	1	2	...	32	2	7	2	...	...	2	...	...
June ...	...	...	...	...	...	2	...	...	1	...	26	3	5	...	...	...	...	...	...	...
July ...	...	...	...	...	...	2	1	...	...	2	1	17	3	13	...	...	...	...	...	...
August ...	...	...	...	...	...	3	...	...	1	2	...	30	2	5	...	...	...	...	...	...
September ...	...	...	...	...	2	9	1	...	...	3	4	95	2	18	...	...	...	1	...	...
October ...	...	...	...	...	1	6	...	...	...	7	10	117	2	15	...	...	...	1	...	...
November ...	...	...	...	...	3	10	4	2	...	10	4	133	1	16	...	...	...	1	...	...
December ...	...	2	...	...	1	4	3	1	2	9	13	141	4	13	...	...	2	...	...	...
Year 1891	...	9	...	...	16	67	11	3	7	52	35	685	26	130	...	...	...	10	...	1

TABLE XIV.

Shewing the total deaths and death-rates of the seven zymotic diseases for each year during the fourteen years 1878-1891.

Year	1878.	1879.	1880.	1881.	1882.	1883.	Mean of Six Years
Estimated Population, according to Registrar General.	78,251	80,839	83,427	86,015	88,603	91,204	84,723
Seven Chief Zymotic Diseases.							
	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.
	Death-rate.	Death-rate.	Death-rate.	Death-rate.	Death-rate.	Death-rate.	Death-rate.
Small Pox ...	1 0.012	...	1 0.011	2 0.023	1 0.011	1 0.010	1.0 0.011
Measles ...	3 0.038	10 0.123	67 0.803	1 0.011	32 0.361	11 0.120	20.6 0.243
Scarlatina ...	10 0.127	44 0.544	29 0.347	20 0.232	67 0.756	42 0.460	35.3 0.410
Diphtheria ...	12 0.153	9 0.111	10 0.119	12 0.139	27 0.305	22 0.241	15.3 0.180
Whooping Cough ...	70 0.894	20 0.247	77 0.922	58 0.673	38 0.428	68 0.745	55.1 0.650
Fever ...	28 0.357	21 0.259	23 0.275	21 0.244	18 0.203	35 0.383	24.3 0.286
Diarrhoea ...	73 0.932	33 0.408	99 1.186	50 0.581	110 1.241	74 0.811	73.1 0.859
Total ...	197 2.513	137 1.692	306 3.653	164 1.903	293 3.306	253 2.770	224.7 2.639

TABLE XIV—continued.

Shewing the total deaths and death-rates of the seven zymotic diseases for each year during the fourteen years 1878-1891.

Year.	1884.	1885.	1886.	1887.	1888.	1889.	Mean of Six Years.	1890.	1891.
Estimated Population according to Registrar-General.	93,468	97,034	100,736	104,580	108,570	112,712	102,850	117,012	130,283
Seven Chief Zymotic Diseases									
	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.
	Death-rate.	Death-rate.	Death-rate.	Death-rate.	Death-rate.	Death-rate.	Death-rate.	Death-rate.	Death-rate.
Small Pox	8	2	1	11	4	...	4·3	...	...
Measles	83	198	17	62	108	41	84·8	65	55
Scarlatina	128	26	17	11	32	15	38·2	19	35
Diphtheria	35	39	14	20	8	8	20·7	15	16
Whooping Cough	31	118	46	47	54	79	62·5	38	89
Fever	34	39	73	17	36	30	38·2	23	26
Diarrhoea	157	99	164	110	82	75	114·5	122	52
Total	476	521	332	278	324	248	363·2	282	273
	5·088	5·367	3·295	2·658	2·994	2·191	3·598	2·410	2·095

**SMALL POX.**—No deaths were registered from this disease during the year. 9 cases of small-pox were reported to me under the provisions of the Infectious Disease Notification Act. Amongst this number 5 are referred to in the Report to the Port Sanitary Authority as having been removed direct from vessels in the Docks to the Hamadryad Hospital ship. The other cases although notified from within the Borough were also connected either directly or indirectly with the seafaring population. The first case was that of a sailor residing in Thesiger Street, who developed the disease shortly after his arrival in Cardiff. The patient who was engineer's steward on board the s.s. "White Jacket," contracted small-pox on the voyage from Carthage to Newport. He was discharged from the vessel at the latter port, and on January 19th came to Cardiff by train. On the following day, a few hours after the receipt of the notification from his medical attendant, he was removed to the infectious ward of the hospital. The next case which occurred in the Seamen's Union Home, in West Bute Street, was that of a sailor paid off from the s.s. "Garde-a-pee," at Antwerp. Several of the crew of this vessel had suffered from small-pox during the voyage to that port. From one of these the patient contracted the disease, the first symptoms of which appeared on February 10th, during his stay in London, and two days before his arrival in Cardiff. On the 14th a medical man was called in who promptly notified the case to me, immediately after the receipt of the notice, the patient was removed to the hospital. This man had mixed freely with the inmates of the Seamen's Home during the three days of his residence in that institution, and according to his statement, before he was aware of the nature of the disease from which he was suffering. On March 5, I received notice of a case of small-pox in Nelson Street, on visiting the house I found the patient, a woman, aged 21 years, to be suffering from that disease. The origin of this case was obscure, but I have reason to suspect that the disease was contracted from the above mentioned case in the Seamen's Home. The date of attack would also point to this conclusion. This case was also removed to the hospital. On March 17th another case of small-pox occurred in the same street, a girl, aged 14 years, living with her parents, and who had most probably come in contact with the previous case. The patient was removed to the hospital on the following day. Since that date no other cases of this disease occurred in the town. In each case the infected houses and articles were thoroughly disinfected, those of the inmates who were unprotected by vaccination were revaccinated, and every possible means taken against the further spread of the disease.

**MEASLES.**—Fifty-five deaths were registered from this disease during the year, as compared with 65 in 1890, with 41 in 1889, and with 108 in 1888. The death-rate was equal to 0·42 per 1,000 persons living against 0·55, the rate in 1890, and 0·78, the mean death-rate from this disease, in the six previous years. Of these 55 deaths 7 occurred in the first quarter, 5 in the second quarter, 9 in the third quarter, and 34 in the fourth quarter of the year.

**WHOOPIING COUGH.**—There were 89 deaths from this disease registered in the borough, being equal to an annual death-rate of 0·68 per 1,000, as compared with 0·32, the rate in 1890, and with 0·60, the average rate in the six previous years. The chief incidence of the mortality fell upon young children; 81 of these deaths occurred amongst persons under 5 years of age. The fatality was highest in the fourth quarter of the year, when 34 deaths were registered; the death-rate being 0·71 above the average rate in the five preceding fourth quarters. The

mortality from this disease was high towards the end of the year throughout the country, the death-rate in the 28 large towns, in the fourth quarter, exceeding that in the corresponding period of any year since 1881.

**DIPHTHERIA.**—The 16 deaths ascribed to Diphtheria corresponded to an annual death-rate of 0·12 per 1,000, as compared with 0·16, the average rate in the six previous years, and with 0·21, the rate in the 28 large towns. The death-rate from this disease varied from 0·02 in Halifax and 0·04 in Wolverhampton and Leeds to 0·33 in Salford and 0·32 in London.

**SCARLET FEVER.**—Thirty-five deaths were registered from this disease during the year as compared with 19 in 1890. The deaths were equal to an annual death-rate of 0·26 per 1,000 persons living against 0·16, the rate in 1890, and 0·18, the average rate in the six previous years. The number of deaths registered from Scarlet Fever exceeded that of any year since 1884, when 128 deaths were recorded.

The total number of cases reported under the Infectious Disease Notification Act amounted to 685—the number increasing from 71 in the first quarter and 81 in the second quarter to 142 and 391 in the third and fourth quarters of the year respectively.

The case Mortality varied considerably during different seasons of the year, the proportion of deaths to recorded cases increasing from 1·4 per cent. in the first quarter and 2·4 per cent. in the second quarter to 3·5 and 6·8 per cent. in the third and 4th quarters. The influence of age on the mortality in this disease is shown by the fact that 51 per cent. of the deaths occurred amongst children under five years of age.

Scarlet Fever prevailed generally throughout the district. Its spread was in a great measure due to the imperfect isolation of the infected sick amongst the poorer classes of the inhabitants under circumstances which afford a good example of the necessity for the Hospital for Infectious Diseases which you are now about to erect. This disease when once introduced into the crowded houses of the poor almost invariably spreads to all the susceptible inmates, as complete separation of the sick from the healthy is in such cases an absolute impossibility. The Public Elementary Schools did not apparently on this occasion contribute materially to the spread of the disease, and I did not, therefore, consider it advisable to recommend their closure. As the ordinary closure during the holidays appeared to have no influence over the outbreak it did not seem probable that compulsory closure during the school term would be attended with any better results. In some few instances the spread was undoubtedly due to infected children attending schools. In these cases the disease was of a very mild type and was not recognized by the parents, so that no medical attendance was procured, and no notice of the cases was sent to the Sanitary Authority.

The compulsory closure of schools, which seriously interferes with the educational work of the district, should not, I apprehend, be resorted to unless there is a clear prospect of preventing the propagating of infectious disease. In this outbreak of Scarlet Fever there did not appear to me to be the same necessity for closure as in the case of the epidemic of measles which occurred in 1888-89, when the elementary schools were closed for a period of six weeks with such marked benefit.

In the case of Measles the premonitory symptoms are of such a vague character that the disease is frequently not recognized until the characteristic rash appears. Children are therefore frequently sent to school during the infectious period. Moreover, the sanitary officers receive no systematic notification of cases

of measles, so that in many cases it is not possible to prohibit the attendance at school of infected scholars. Closure of schools under such circumstances must necessarily diminish the risks of the disease spreading amongst children, whereas in Scarlet Fever, which is probably not so infectious during the early period of the illness, and in which a complete system of notification brings the vast majority of cases to the notice of the Sanitary Authority, few infected children, or children from infected houses, are allowed to attend school. If with this notification there had been means of isolating cases in a hospital the extent of the outbreak would I believe have been much curtailed.

**ENTERIC OR TYPHOID FEVER.**—The 26 deaths registered from this disease were equal to an annual death-rate of 0·19 per 1,000 persons, as compared with 0·30, the mean death-rate from this disease in the six previous years. The number of cases of Enteric Fever notified, and the number of deaths registered during the past three years, are shown below.

	Cases Notified.	Deaths.
1888 .....	114 .....	36
1889 .....	132 .....	30
1890 .....	152 .....	23
1891 .....	130 .....	26

The following table shows the cases reported, and number of deaths, during each quarter of the year 1891.

	Cases Notified.	Deaths.
First quarter ....	32 .....	6
Second do. ....	18 .....	6
Third do. ....	36 .....	7
Fourth do. ....	44 .....	7

The cases and deaths were distributed in Wards as follows :—

		CASES REPORTED.	DEATHS.
Central	Ward	7	3
South	„	19	5
Cathays	„	18	2
Park	„	12	2
Adamsdown	„	21	4
Riverside	„	7	1
Canton	„	6	1
Roath	„	6	2
Grangetown	„	14	1
Splott	„	20	5

The proportion of deaths to cases notified during the year was 20 per cent., a somewhat high rate of mortality. The total number of houses invaded was 103, in 6 of which multiple attacks occurred. Very careful enquiry was made with the sanitary surroundings of these cases, with a view of ascertaining, if possible, any cause which might have contributed to the development of the disease. Structural defects in drainage and other insanitary conditions were found in 23 houses in which the disease occurred, and in them it seemed probable that sewer gas charged with the specific poison of the disease had gained access to the dwellings. In each case the



Chart showing the influence of temperature on the diarrheal death-rate in Cardiff during the summer quarters of the years 1872-91.

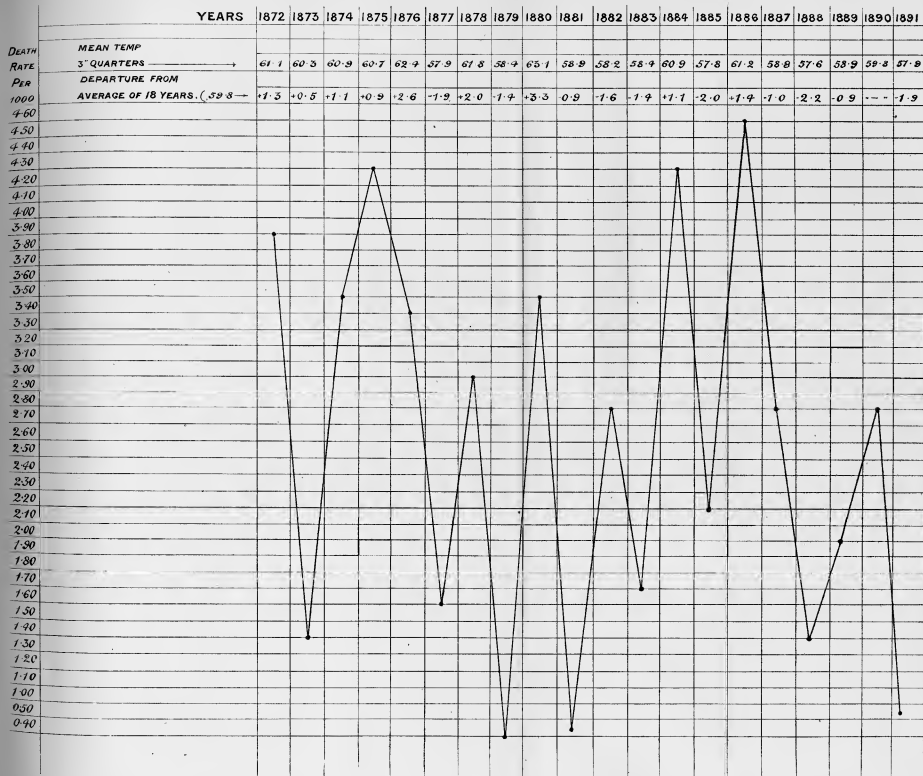
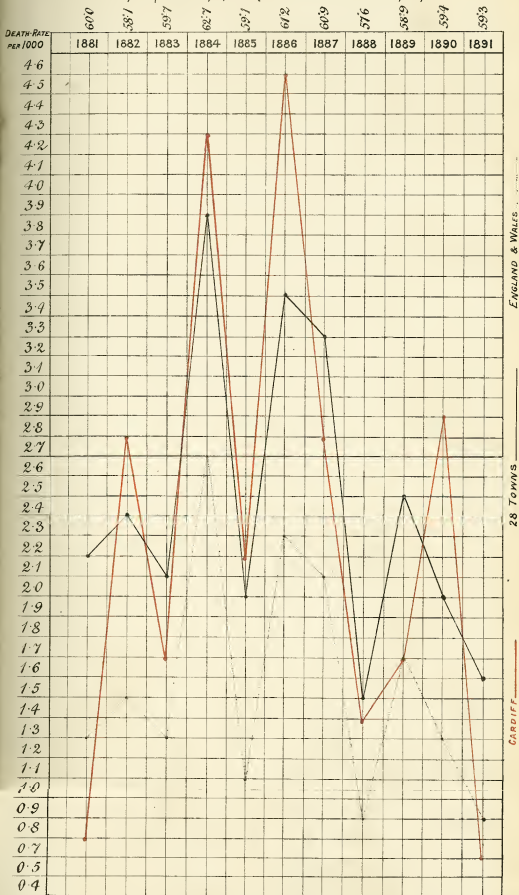


Chart showing the Diarrhoeal Death-rate in England and Wales, in the 28 large towns, and in Cardiff during the 3<sup>rd</sup> Quarters of the Decennium, 1881-91.

Mean Temperature in the 3<sup>rd</sup> Quarters of 1881-91 at Greenwich.



character of the water supplied to the household attacked was made the subject of investigation, but in no case was there any evidence of contamination. In a certain number of instances (eighteen) it was found that the persons attacked had, on various occasions, been in the habit of drinking water of suspicious quality while at work either on board vessels or in the neighbourhood of the docks, but it was impossible in these cases to connect any particular water supply with this illness. In the case, however, of sailors who were brought into the port suffering from Enteric fever, the attacks could in the majority of instances be traced with a high degree of probability to the use of impure water.

**DIARRHŒA.**—The deaths from Diarrhœa numbered 52, compared with 122 in 1890. The number of deaths was equal to an annual rate of 0·39 per 1000 persons, the smallest rate of mortality in any year since 1877, when a death rate of 0·25 was recorded. The death rate from Diarrhœa in 1891 was 0·63 below the mean rate in the previous six years. In the twenty-eight large towns of England and Wales the deaths from Diarrhœa were equal to an annual rate of mortality of 0·67 per 1,000, against an average rate of 0·89 in the preceding ten years 1881—90. Diarrhœa is a disease which usually prevails extensively during the summer and autumn, especially that form of it which attacks infants, upon whom the mortality chiefly falls.

This mortality is obviously intimately related to certain meteorological conditions, and a reference to the accompanying Chart will shew that the rise and decline in the death rate from this disease coincide generally with the rise and fall of the mean temperature of the air. In the unusually cold and wet summer, therefore, is to be found the explanation of the low diarrhœal death rate of 1891.

The following table gives the death-rate from Constitutional, Local, and Developmental Diseases, and from Violent Deaths, during the years 1885 to 1891, inclusive :—

TABLE XVI.

Year.	Class II.	Class III.	Class IV.	Class V.
	Constitutional Death-rate.	Local Death-rate.	Developmental Death-rate.	Violent Death-rate.
1885	4·122	10·924	3·091	1·184
1886	4·305	10·373	3·563	1·309
1887	3·203	10·384	3·442	1·400
1888	3·306	9·275	2·947	0·994
1889	3·690	9·164	1·446	1·029
1890	3·498	10·101	1·692	0·948
Mean of six years ....	3·687	10·035	2·696	1·144
1891	3·645	11·398	1·366	1·166

SANITARY CONDITION OF THE DISTRICT AND SUMMARY OF WORK  
PERFORMED BY THE  
OFFICERS OF THE HEALTH DEPARTMENT.

TABLE XVII.

The area of the Urban Sanitary District of Cardiff, is as follows :—

Parish of St. Mary	}	....	....	2791 acres.
„ St. John		....	....	
„ Roath		....	....	3348 „
„ Canton		....	....	2270 „
		TOTAL	....	8409 „

According to the Census of April, 1891, the population and number of inhabited houses in each parish were as follows :—

Parish.	Inhabited Houses.	Population.
St. John ....	4,386	27,758
St. Mary ....	4,054	26,943 *
Roath ....	6,552	39,420
Canton ....	5,484	32,805
TOTAL ....	20,476 †	126,326

\* This does not include the floating population.

† The number of inhabited houses at the Census of 1881 was 12,185.

NEW HOUSES.—The yearly increase of houses is shown by the following returns obtained from Mr. W. Harpur, M.I.C.E., Borough Engineer and Surveyor.

Number of Houses and Shops built in the Borough during the last ten years:—

TABLE XVIII.

From August 1881 to August 1882	....	....	686
„ „ 1882 „ 1883	....	....	980
„ „ 1883 „ 1884	....	....	1445
„ „ 1884 „ 1885	....	....	1345
„ „ 1885 „ 1886	....	....	1201
„ „ 1886 „ 1887	....	....	1226
„ „ 1887 „ 1888	....	....	1062
„ „ 1888 „ 1889	....	....	603
„ „ 1889 „ 1890	....	....	745
„ „ 1890 „ 1891	....	....	730
TOTAL			10,023

INSPECTION OF THE DISTRICT.—In conformity with the Regulations of the Local Government Board, a systematic inspection of the district has been made by your Inspectors of Nuisances, and a large number of Sanitary defects in various parts of the town have been discovered and remedied.

The following table gives the results of the house to house inspection made during the year :—

### HOUSE INSPECTION.—CENTRAL WARD.

Name of Street.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Siphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scullery Sinks connected direct with Drain.	Inside Closets not ventilated.	Closets not supplied with water.	Other Nuisances.
Queen Street	24	...	...	2	...	...	...	2	...
St. John's Square	13	...	...	...	...	...	...	9	...
Gullivers Court	2	...	...	1	...	...	...	2	1
Evans' Court	2	...	...	...	...	...	...	1	...
Jenkins' Court	5	...	...	...	...	...	...	5	...
Mathews' Court	6	...	...	...	...	...	...	6	...
Jonathan Court	2	...	...	...	...	...	...	1	...
Bryant Court	2	...	...	...	...	...	...	1	...
Womanby Street	10	...	...	1	...	...	...	8	1
Harris Court	6	...	...	1	...	...	...	2	...
Church Street	16	...	1	1	...	...	...	...	...
Bridge Street	72	2	...	...	...	1	...	66	6
Quay Street	17	...	...	1	...	...	...	13	1
Castle Street	22	...	...	...	...	...	...	3	...
Canal Bank	9	...	...	...	...	...	...	...	...
Duke Street	35	...	...	...	...	...	...	...	...
High Street	29	...	...	1	2	1	1	2	...
Frederick Street	98	9	...	1	2	...	...	98	14
St. Mary Street	96	...	...	9	3	14	1	10	...
Gough Street	49	...	...	3	...	19	...	49	4
Havelock Street	46	...	...	3	...	14	...	46	3
Park Street	31	...	...	2	...	...	...	26	6
Westgate Street	24	...	2	2	...	...	...	2	2
Kingston Court	10	...	...	...	...	...	...	...	...
Williams Crescent	5	...	...	...	...	...	...	2	...
Hill Street	8	...	...	...	...	...	...	8	1
Castle Street	7	...	...	...	...	...	...	2	...
Canal	28	...	...	...	...	...	...	28	5
Hill's Terrace	60	...	1	...	...	...	...	60	17
Royal Arcade	42	...	...	...	...	...	...	1	...
Ruperra Street	16	1	...	1	...	...	...	16	3
Eisteddfod Street	41	...	...	...	...	27	...	41	2
Bute Street	52	2	2	5	1	...	...	28	15
Bute Terrace	34	5	...	...	...	...	...	34	10
Wood Street	66	...	1	3	1	7	...	61	4
Rodney Street	18	2	...	...	...	...	...	18	1
Homfray Street	24	2	...	...	1	...	...	24	6
Tredegar Street	49	2	...	1	...	...	...	49	12
Mill Lane and Court	19	...	...	...	...	...	...	6	1
Wharton Street and Place	21	...	...	4	...	...	...	21	1
Caroline Street	43	...	...	10	2	2	...	39	1
Baker's Row	11	...	1	1	3	...	...	11	...
Lewis Williams Court	6	...	...	3	...	...	...	3	...
Union Buildings	21	...	1	1	...	...	...	11	2
Green Garden Court	6	...	...	...	...	...	...	1	1
Kettle Court	4	...	...	...	1	...	...	4	1
Evans' Court	3	...	...	...	...	...	...	...	...
Carpenter's Arms Court	7	...	...	...	1	...	...	7	2
Temperance Terrace	4	...	...	...	...	...	...	...	...
Thomas Terrace	5	...	...	2	...	...	...	5	...
Working Street	24	...	...	1	...	...	...	17	...

## CENTRAL WARD (CONTINUED.)

Name of Street.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Sponges Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scullery Sinks connected direct with Drain.	Inside Closets not ventilated.	Closets not supplied with water.	Other Nuisances.
Trinity Street	11	....	....	1	....	1	....	7	1
Victoria Place	4	....	....	....	....	....	....	4	....
Rising Sun Court	5	....	....	....	....	....	....	5	....
The Hayes	22	....	....	1	....	1	....	13	....
Queen's Place	5	....	....	....	....	....	....	7	....
Mason's Arms Court	7	....	....	....	....	....	....	3	....
Rowlands Court	4	....	....	....	....	....	....	6	....
North Road	6	....	....	2	....	....	....	56	18
Millicent Street	63	....	....	....	4	....	....	....	....
Castle Arcade	68	....	....	....	....	....	....	....	2
Wyndham Arcade	32	....	....	....	....	....	....	....	6
G. W. Approach	17	....	....	....	....	....	....	12	4
Ebenezer Street	12	1	....	....	....	....	....	8	3
Plymouth Street	8	....	....	....	....	....	....	10	....
Paradise Place	10	1	....	....	....	....	....	3	....
Friend's Place	3	....	1	....	....	....	....	80	3
Union Street	80	4	....	5	4	....	....	1	....
Moulder's Arms Court	2	....	....	....	....	....	....	....	....
High Street Arcade	33	....	....	....	....	....	....	11	3
Edwards Place	12	....	....	....	6	....	....	8	....
North Edward Street	8	....	....	....	3	....	....	4	....
Guildford Street	8	....	....	....	....	1	....	2	....
Guildford Crescent	7	....	....	....	....	....	....	7	....
Upper Station Terrace	7	....	....	....	....	....	....	11	1
Lower Station Terrace	13	....	....	....	2	....	....	42	2
Edward Street	42	....	....	2	4	....	....	5	....
Little Union Street	5	....	....	1	....	....	....	3	....
Trices's Court	3	....	....	....	....	....	....	37	6
Love Lane	37	1	....	....	....	3	....	17	....
Wellington Terrace	17	....	....	....	1	....	....	21	2
East Terrace	21	....	....	2	2	....	....	4	....
French Cottages	4	....	....	....	....	....	....	5	....
Love Lane Court	5	....	....	....	....	....	....	2	....
Peter's Court	2	....	....	....	....	....	....	16	4
Nelson Terrace	16	....	....	....	1	....	2	35	7
Little Frederick Street	35	....	....	6	4	....	....	52	9
Mary Ann Street	52	1	1	1	3	....	....	32	....
David Street	32	....	....	3	1	....	....	30	3
Stanley Street	30	2	....	1	2	....	....	4	4
Giles Court	4	....	....	....	....	....	....	11	10
John Street	11	....	....	....	....	....	....	39	9
Blackweir	45	....	....	3	7	....	....	5	....
Spring Garden Court	5	....	....	5	....	....	....	1	....
Queen Street	11	....	....	1	....	....	1	....	....

## ROATH WARD.

Name of Street.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Syphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scullery Sinks connected direct with drain.	Inside closets not ventilated.	Closets not supplied with water.	Other Nuisances.
Beresford Road	41	....	....	1	....	....	....	41	9
Spring Gardens Place	17	....	....	....	....	....	....	17	3
Spring Gardens Terrace	20	....	1	....	....	....	....	20	1
Blanche Street	36	....	1	....	....	....	....	36	8
Arthur Street	37	7	1	3	....	....	....	37	16
Pearl Place	6	....	....	....	....	....	....	6	....
Maud Street	41	3	2	2	....	....	....	41	9
Theodore Street	48	....	3	3	....	....	....	49	29
Harold Street	50	....	1	2	4	....	....	50	13
Bertram	62	6	3	2	....	....	....	62	13
Cecil Street	63	3	1	4	5	....	....	63	11
John Street	61	5	3	4	11	....	....	61	26
Tyler Street	16	....	....	1	1	....	....	16	2
Fox Street	12	....	....	1	1	....	....	12	2
Booker Street	14	....	....	....	....	....	....	14	....
Fort Street	13	....	....	1	....	....	....	13	3
Broadway	183	5	2	5	11	3	....	177	31
Sapphire Street	54	....	1	1	2	....	....	54	8
Emerald Street	64	....	2	5	3	....	....	64	12
Ruby Street	58	....	....	3	1	....	....	58	12
Diamond Street	67	5	2	2	5	1	....	67	14
Topaz Street	61	....	....	4	6	1	....	61	15
Clifton Street	147	6	....	5	2	....	....	127	15
Pearl Street	148	1	3	9	4	....	....	147	23
Richards Terrace	121	1	2	5	10	14	15	95	9
Stacey Road	65	....	....	27	30	13	11	51	21

## ADAMSDOWN WARD

Name of Street.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Syphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scullery Sinks connected direct with drain.	Inside Closets not ventilated.	Closets not supplied with water.	Other Nuisances.
Adam Street	118	4	....	10	33	1	....	106	16
Duffryn Street	24	....	....	1	10	....	....	24	16
Noah Street	7	....	....	....	3	....	....	7	....
Pellett Street	25	....	....	....	5	1	....	25	5
South Terrace	6	....	....	....	1	....	....	6	5
Garth Street	20	1	2	7	10	....	..	20	9

## PARK WARD.

Name of Street.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Syphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scullery Sinks connected direct with drain.	Inside closets not ventilated.	Closets not supplied with water.	Other Nuisances.
Moy Road	25	....	....	1	....	....	....	25	10
Violet Row	11	....	....	....	....	....	....	11	1
Mackintosh Place	32	....	....	....	....	....	....	22	4
Daniel Street	62	....	4	2	10	....	....	62	25
Robert Street	71	2	5	6	14	....	....	71	20
Norman Street	14	....	1	....	....	....	....	14	2
Florentia Street	12	....	....	....	....	....	....	12	....
Alexander Street	21	....	....	1	....	....	....	21	....
Woodville Road (East)	35	....	2	1	4	....	....	28	18
Crwys Road	34	....	2	....	....	....	....	32	6

## GRANGETOWN WARD.

Newport Street	25	....	....	2	8	....	....	25	2
Bradford Street	26	....	....	7	8	....	....	26	....
Broomfield Street	26	....	....	2	3	....	....	26	1
Ludlow Street	24	1	....	....	5	1	....	24	2
Kent Street	67	1	2	1	3	....	....	67	5
Hewell Street	74	....	3	4	16	....	....	73	15
Amherst Street	46	....	....	6	10	1	....	46	2
Earl Street	22	....	....	1	1	....	....	22	3
Oakley Street	73	1	1	4	8	....	....	73	15
Knole Street	54	....	....	3	4	....	....	54	15
Broomsgrove Street	32	....	....	....	....	....	....	32	1
Holmesdale Street	86	....	....	....	8	....	....	86	13
Sevenoaks Street	38	....	....	5	8	....	....	38	13
Herbert Street	10	....	....	1	1	....	....	10	1
Cambridge Street	26	....	....	2	2	....	....	25	3
Ferry Road	53	....	....	1	....	....	1	51	1
Matthews Terrace	19	....	1	....	....	....	....	18	....
Mildon Terrace	10	....	....	....	2	....	....	9	4
Sir Edward Terrace	11	....	....	....	....	....	....	11	....
Gladstone Terrace	11	....	....	1	....	....	....	11	1
Clive Street	109	1	2	6	2	....	2	68	8
Stagg Terrace	13	....	1	....	....	....	....	13	1
St. Fagans	13	....	1	....	....	....	....	13	....
Llanmaes Street	52	....	1	....	....	....	....	25	....
Lucknow Street	12	....	1	1	....	....	....	12	3
Bishop Street	20	....	....	....	....	....	....	20	3
Pentrebane Street	33	....	....	....	....	....	....	33	....
Thomas Street	45	....	....	1	3	....	....	45	15
Redlaver Street	37	....	....	....	....	....	....	36	5
Madras Street	27	3	....	....	2	....	....	27	9
Machen Street	8	....	....	....	1	....	....	8	....
Van Street	9	....	....	....	1	....	....	9	....
Rudry Street	10	....	....	....	....	....	....	10	....
Bedwas Street	13	....	....	....	....	....	....	13	....
Rookwood Street	17	....	....	....	....	....	....	17	3
Tynant Street	26	....	....	....	....	....	....	26	....
Virgil Street	11	....	....	....	....	....	....	11	....
Hereford Street	18	....	....	....	....	....	....	17	2
North Clive Street	81	....	....	2	6	5	....	75	3



The additional work thrown on the department by the "Infectious Disease Notification Act," and by other recent Acts relating to Sanitary matters, necessitated the appointment of another Inspector, and in April George Thomas was appointed Assistant Inspector of Nuisances, for the express purpose of carrying out the instructions of the Medical Officer of Health with regard to dealing with infectious diseases. This arrangement will, I believe, be found to work well in general; although during the prevalence of any epidemic it will be necessary that the District Inspectors assist in this work.

In December of the current year an Inspector, Charles Hill, was appointed to carry out the duties connected with the Cowsheds, Dairies and Milkshops order and to take samples to be submitted to the Public Analyst, under the provisions of the "Sale of Food and Drugs" Act.

In my last annual report I mentioned, in connection with the systematic inspection of the district, that some of the Courts in the town exhibited such gross defects as to render the houses in them unfit for habitation. I have, therefore, to report, that during the year I have made six representations under Part II, of the "Housing of the Working Classes" Act, 1890, in respect of houses in Mill Lane Court, and that in consequence of these representations, these houses have been demolished. This part of the Act deals with houses unfit for habitation, or obstructive buildings, stopping the ventilation, or making other buildings unfit. It provides that it shall be the duty of the Medical Officer of Health to represent to the Local Authority any house which appears to him to be in a state so dangerous to health as to be unfit for habitation, and that the Local Authority shall, if they agree with the representation, take proceedings before Justices against the owner or occupier for closing the dwelling. After the closing order has been obtained, the Sanitary Authority may proceed to make an order for the demolition of the premises. The Sanitary conditions of some of the courts in the Borough, has, during the past three years, been greatly improved; the owners have, at my suggestion, substituted "Trough Closets" for the old and defective apparatus formerly in use. These closets which are most efficient, are so strongly constructed that it is almost impossible that they should get out of order; they are, in my opinion, the only form of closet at all suitable for the inhabitants of courts and alleys. The arrangement is exceedingly simple, no complicated apparatus of any kind being attached; the closets are arranged in rows of five or six, and are connected with a trough common to them all, which is partly filled with water, into which the excreta fall and are discharged from it into the drain or sewer by the automatic discharge of a volume of water let into it from a flushing tank at the upper end. The last annual report of the Local Government Board contains a report on this particular form of closet by Dr. Parsons, one of the Board's inspectors, in which it is stated that "Trough Closets" are suitable for places where many closets stand in a row, and where closets are used indiscriminately by many people, as at mills and schools, and to replace ranges of privies in old courts.

On referring to the table of House Inspection it will be seen that out of 5,356 houses inspected, 4,597 were found, as regards their closet accommodation, to be unprovided with any kind of flushing apparatus.

It is, I believe, acknowledged by all those who are competent to form an opinion on the subject, that closet pans and house drains cannot be kept in an efficient state of cleanliness by merely throwing slops and waste water down them; a nuisance is sure to arise sooner or later. During the year fifty-nine of these defective closets

have been fitted with a water supply, by means of a two gallon "Waste Preventor" cistern, in compliance with notices served by the Sanitary Authority. Doubtless, in the very poor and most ill-conditioned parts of the district, any kind of flushing cistern, or indeed any kind of water closet, will soon get out of order; and in these cases there are considerable difficulties in the way of providing any regular supply of water to the closet, but this would apply to an exceedingly small proportion of the population. No reason whatever exists for not providing the houses of respectable artisans and labourers with the proper means of regularly flushing their closets. I have, therefore, to urge upon you most strongly the desirability of enforcing this provision in the case of new houses in your district.

In those exceptional cases where such an arrangement is undesirable, the outside premises could be fitted with an apparatus known as the automatic waste-water closet or slop closet. In these closets the refuse liquids of the household are from time to time automatically discharged by a sudden forcible stream into the drain. These closets are, of course, only suitable for out-of-door use, as they are flushed with dirty slop water, and, for this as well as other reasons, are less cleanly than a good water closet flushed with clean water. In connection with the above subject, it is satisfactory to note that the bye-laws which you are now submitting to the Local Government Board for their sanction, under Section 23(1) of the Public Health Acts Amendment Act, 1890, will contain, amongst other things, provisions relating to the supply of water to water closets. From time to time, during the year, my attention has been called to the insanitary condition of houses, caused by the cutting off of the water supply to the premises, in consequence of the owners or occupiers having neglected to pay their water rates. As the action in these cases was taken by the Corporation officials, under the powers conferred by the Waterworks Clauses Act, it appeared doubtful whether the Sanitary Authority could require the owners to lay on the water supply again. I had, therefore, to submit this matter to the consideration of the Health Committee, who requested the Town Clerk to report fully upon the subject. The following is an abstract of this report:—

"That Section 60 of the Cardiff Improvement Act, 1875, provides that —

"If upon the report of the Medical Officer of Health of the Borough, it appears to the Corporation  
 "that any house in any street or court in the Borough in which any water main of the  
 "Corporation is laid, be without a proper supply of water, the Corporation may give notice  
 "in writing to the owner of such house, requiring him within the time specified in such notice  
 "to obtain from the Corporation such supply for such house, and if such notice be not  
 "complied with within the time therein specified, the Corporation may, and if they think fit,  
 "shall do such works as may be necessary for the providing, and may provide such supply,  
 "and the expense of such works may be recovered in a summary manner, or may be deemed  
 "to be private improvement expenses, and may be recovered by the Corporation accordingly,  
 "and the Corporation may levy the same water rent or rate in respect of such supply on the  
 "owner or occupier of such house as if he had demanded and received such supply of water."

"In those cases where the water rate is not paid when due, Section 74 of the Waterworks Clauses Acts, 1874 provides: —

"If any person supplied with water by the undertakers, or liable as herein or in the Special  
 "Act provided to pay the water rate, neglect to pay such water rate at any of the  
 "said times of payment thereof, the undertakers may stop the water from flowing into the  
 "premises in respect of which such rate is payable, by cutting off the pipe to such  
 "premises, or by such means as the undertakers shall think fit, and may recover the rate due  
 "from such person, if less than £20, with the expenses of cutting off the water and costs of  
 "recovering the rate in the same manner as any damages, for the recovery of which no special  
 "provision is made are recoverable, by this or the Special Act; or if the rate so due amount  
 "to £20 or upwards, the undertakers may recover the same with expenses of cutting off the  
 "water by action in any Court of competent jurisdiction."

"The Corporation therefore have two remedies in such cases, namely: either to cut off the supply of water and sue for the arrears of rate, or to allow the water supply to remain and sue for each rate as it becomes due.

"If the water supply is cut off under the provisions of this Act, every thing that has been done under the Cardiff Improvement Act, 1875, before-mentioned is at once swept away, and that which has been done by the one hand of the Corporation is undone with the other.

"It is questionable whether in a case where default has been made in payment of water rate and the water supply cut off, the Corporation could require the owner to immediately lay on the supply again.

"The only solution of the difficulty therefore is to have a test case on the point, or where the water has been laid on under the provisions of the Cardiff Improvement Act and the water rate not paid, each rate should be sued for as it becomes due without cutting off the supply.

"Where the supply has been so cut off, the tenants are of necessity obliged to obtain water from some source, and without doubt are supplied by neighbours. A strict watch should be kept on those persons, and prosecutions should be ordered for stealing in every case where sufficient evidence can be obtained in support.

BYE-LAWS.—During the year, new building bye-laws have been framed and submitted to the Local Government Board for their approval. These regulations, which will come into force when the Board's sanction has been obtained, will enable your Authority to exercise a more complete supervision with respect to the following matters:—

- (a) The structure of walls, foundations, roofs and chimneys of new buildings, for securing stability and the prevention of fires, and for purposes of health.
- (b) The sufficiency of the space about buildings to secure a free circulation of air, and with respect to the ventilation of buildings.
- (c) The drainage of buildings, water closets, earth closets, privies, ash-pits, and cesspools, in connection with buildings and to the closing of buildings or parts of buildings unfit for human habitation, and the prohibition of their use for such habitation.

Bye-Laws have also been made with respect to Common Lodging Houses, and houses let in lodgings or occupied by more than one family. At the same time advantage was taken of the powers conferred by the Merchants' Shipping (Fishing Boats) Acts, to frame bye-laws with respect to Seamen's Lodging Houses. These several sets of bye-laws, which received the approval of the Local Government Board and Board of Trade respectively, came into force on the 24th March, 1891.

"SALE OF FOOD AND DRUGS ACT."—The following articles were analysed by the Borough Analyst, under the provisions of the above Acts, during the year 1891:—

Samples.	Numbers of Samples obtained.	Numbers of Genuine Samples.	Number of Adulterations	Remarks.
Milk	116	108	8	7 convictions; fines, £2, £1, 15/-, 10/- respectively.
Flour	4	4	—	
Butter	10	10	—	
Margarine	1	—	1	1 conviction, fine £5.
Coffee	8	7	1	1 " " £2.
Whisky	10	8	2	2 convictions, " £2.
Gin	3	2	1	1 conviction, " £1.
Rum	2	2	—	
Total	154	141	13	

**WATER SUPPLY.**—Six samples of water were submitted to the Public Analyst for Analysis, two of which were found to be polluted; in these cases orders were obtained from the magistrates to close the wells from which these samples were obtained.

From information from Mr. J. A. B. Williams, C.E., Water Engineer, I find that the number of persons at present supplied within the water limits is estimated to be 145,000, and that the amount of water supplied per day as been at the rate of 3,250,000 gallons, giving an average daily supply of 22 gallons per head of the population. The quality of this water is shewn by the subjoined Analyses to be sufficiently good for drinking purposes.

Result of Analyses of samples of water, expressed in parts per 100,000 :—

No. of Sample.	Description.	Total Solid Impurity.	Albuminoid Ammonia.	Free Ammonia	Nitrogen as Nitrates & Nitrites	Previous Sewage Contamination.	Chlorine.	Sulphuric Acid in Sulphates.	Magnesia Salts.	Hardness.			Remarks.
										Temporary.	Persistent.	Total.	
1	Sample B 7 Llanishen Water	18'4	0'009	0'001	0'01	nil.	1'6	1'68	...	3'8	12'6	16'4	Very faint yellow colour and clear.
2	Sample B. 8, Ely Water	32'25	0'004	nil	0'14	trace	1'95	3'19	...	15'6	14'5	30'1	Practically colourless and clear.
3	Sample B9, Town Water (Canton)	30'8	0'012	0'002	0'12	trace	1'85	3'20	...	15'0	14'3	29'3	Faint yellow colour and clear.
4	Sample B, 10, Town Water (Roath)	17'8	0'009	0'001	0'02	nil	1'55	1'96	...	3'5	12'8	16'3	Faint yellow colour and clear.

\* **SCAVENGING OPERATIONS.**—The scavenging of the town is undertaken by the Sanitary Authority, and the work has, as usual, been most efficiently performed under the supervision of Mr. Woosey, the Superintendent of this department, from whom I have obtained the following particulars connected with the routine of the work :—

The main thoroughfares are cleared every day, commencing at 7 a.m. Shop refuse is cleared from 7.30 a.m. to 8.0 a.m. every morning.

All main thoroughfares cleared by 11.0 a.m.

Household refuse is cleared three nights weekly, commencing at 11.0 p.m. to 6.0 a.m. on Monday, Wednesday, and Friday nights. All householders are requested to place refuse in a suitable receptacle in the channel in front of the house they occupy. 25 horses and wagons are required three nights weekly to attend to this work.

100 wagon loads is the average each night from 11.0 p.m. to 6.0 a.m.

Back lanes are cleared three days weekly from 1 p.m. to 4 p.m.

Wagons go around with bells, when the occupier places the ash receptacle inside the yard or garden door ready for men to remove it.

**FOOD SUPPLY AND SLAUGHTER-HOUSES.**—The public abattoirs have been regularly inspected. No private slaughter houses exist in the Borough, and no cases of illegally slaughtering in unlicensed premises came to the knowledge of the Sanitary Authority. The Managers of the Public Markets and Slaughter Houses report to me that during the year the following animals were slaughtered :—

	CANTON MARKET.			ROATH MARKET.		
Beasts	....	....	1,006	....	....	7,441
Calves	....	....	467	....	....	2,666
Sheep	....	....	9,850	....	....	34,902
Pigs	....	....	4,378	....	....	23,599
Total	....	....	15,701	....	....	68,608

The 116th Section of the Public Health Act requires the Medical Officer of Health to inspect in any case in which it may appear to him necessary any animal, carcase, meat, poultry, game, fish, or other articles of food, exposed for sale, and intended for the food of man, and if he find that such animal or article is unfit for food, he shall give such instructions as may be necessary for causing the same to be seized, taken, and carried away in order to be dealt with by a Justice. The Public Health Act (Amendment Act) provides for the extension of this section, making it apply to all articles intended for food and exposed for sale. Under these powers the following articles were seized and condemned as unfit for food, and destroyed by order of the Magistrates : —

Beef	....	....	....	1,635 lbs.
Mutton	....	....	....	90 „
Pork	....	....	....	340 „
Total				2,065 lbs.

MAGISTERIAL PROCEEDINGS.—Legal proceedings were taken in the following cases during the year 1891 :—

	No. of Cases.	Fines.		
		£	s.	d.
Depositing Refuse in Streets and Lanes	4	0	10	0
Keeping Swine in Cowsheds	1	5	0	0
Carrying on Trade of Milk Seller without being Registered	3	0	7	6
Magistrates Order obtained to destroy Articles Unfit for Food	3	—		
Proceedings under Sale of Food and Drugs Act	13	15	5	0

In the appendix will be found a summary of the work performed during the year by your Inspectors of Nuisances, who have, as usual, paid the greatest attention to their varied and important duties.

I have the honour to be, Gentlemen,

Your obedient Servant,

EDWARD WALFORD, M.D.,

Medical Officer of Health.

# APPENDIX.

## Report of Inspector of Nuisances

FOR THE YEAR 1891.

CHIEF INSPECTOR OF NUISANCES:—D. VAUGHAN.

### DISTRICT INSPECTORS :

No. 1 District	....	T. W. WARREN.
No. 2        ,,	....	L. DAVIES.
No. 3        ,,	...	F. HELLERMAN.

INSPECTOR FOR INFECTIOUS DISEASES AND DISINFECTION:—G. THOMAS.

INSPECTOR OF DAIRIES, COWSHEDS, AND MILKSHOPS:—C. HILL.

Nuisances Inspected	...	...	...	...	1,778
Notices Issued	...	...	...	...	1,743
Nuisances abated without legal proceedings	...	...	...	...	1,738
,,        ,,        with        ,,        ,,	...	...	...	...	8
Animals kept so as to be a Nuisance	...	...	...	...	43
Injurious and Foul Accumulations	..	...	...	...	428
Nuisances from Smoke	...	...	...	...	3
Suspected samples of Water obtained for Analysis	...	...	...	...	4
Cesspools Cleansed	...	...	...	...	7
,,        Abolished	...	...	...	...	5
Defective Drainage	...	...	...	...	143
Drains Unstopped and Cleansed	...	...	...	...	312
,,        Trapped and Repaired	...	...	...	...	494
,,        Tested	...	...	...	...	107
Foul and offensive closets Cleansed	...	...	...	...	66
Defective Apparatus to Water Closets Repaired	...	..	...	...	84
Water laid on to Dwelling Houses	...	...	...	...	10
,,        ,,        Water Closets	...	..	...	...	59
,,        ,,        Urinals	...	...	...	...	28
Dilapidated and dirty houses Cleansed and Repaired	...	...	...	...	20
Cases of Overcrowding	...	...	...	...	7

### DISINFECTION :—

Houses Disinfected	...	..	...	...	348
Articles of bedding and clothing Disinfected	...	...	...	...	1,592
,,        ,,        Destroyed	...	...	...	...	6
Schools Disinfected	...	...	...	...	12

### OFFENSIVE TRADES :—

Premises Visited	...	...	...	...	45
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## SLAUGHTER HOUSES AND MARKETS:—

Visits paid to Slaughter-houses	...	...	...	87
„ „ Markets	...	...	...	187
Articles Destroyed as Unfit for Food:—				
Beef	...	...	...	1,635 lbs.
Pork	...	...	...	340 „
Mutton	...	...	...	90 „
Butchers Shops Inspected	...	...	...	90

## BAKEHOUSES:—

Total Number on Register	...	...	...	191
Number Inspected	...	...	...	175
Found in Good Condition	...	...	...	142
„ with Defective Drainage	...	...	...	7
„ require Limewashing	...	...	...	22
„ „ Repairs	...	...	...	4
Notices Served and Complied with	...	...	...	8

## COMMON LODGING HOUSES:—

Total Number on Register	...	...	...	16
Registered Rooms	...	...	...	162
Number of Persons Certified to Accommodate	...	...	...	551
„ Inspections made	...	...	...	126
Limewashed and Cleansed	...	...	...	23

## COMMON LODGING HOUSES UNDER NEW BYE-LAWS:—

Total number on Register	...	...	...	11
Registered Rooms	...	...	...	54
Number of Persons Certified to Accommodate	...	...	...	226
„ Inspections	...	...	...	45
Limewashed, Cleansed, and Repaired	...	...	...	11

## COWSHEDS AND MILKSHOPS:—

Number of Cowkeepers on Register	...	...	...	81
„ Milk-sellers	...	...	...	335

Total	...	...	416
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Number of Cowkeepers Registered	...	...	...	2
„ Milksellers	...	...	...	103

Total	...	...	105
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Number of Cowsheds Inspected	...	...	...	82
„ Milksellers	...	...	...	365
„ Revisited	...	...	...	30

Total	...	...	477
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Notices served, Written	...	...	...	11
„ given, Verbal	...	...	...	50

Total	...	...	61
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## CANAL BOATS:—

Number of Boats on Register	...	...	...	44
„ Inspections	...	...	..	77
„ found in Good Condition	...	...	...	68
„ found with Defective Ventilation	...	...	...	8
„ „ Register Plates off	...	...	...	1
„ of Notices Served	...	...	..	8

PARTICULARS OF INSPECTION.				COWSHEDS.	MILKSHOPS.
Total number Inspected	...	...	..	82	365
Found in Good Condition	...	...	..	39	334
Impure Water Supply	...	...	...	1	...
Water Closets, drains defective	...	...	...	1	9
„ „ communicating with premises	...	..	...	...	..
Cesspools	...	...	..	...	...
Yards badly Paved	...	...	...	12	18
Dairies or Milkshops used for purposes incompatible with proper preservation of the milk	...	..	...	...	...
Dirty Milk Vessels	...	...	...	...	...
Infectious Disease amongst Persons Employed	...	..	...	1	4
Swine kept on Premises,) proceedings taken and a fine of £5 and costs imposed)	...	...	...	1	..
Cowsheds with Defective Lighting, Ventilation, Cleansing and air space	...	...	..	1	...
Cowsheds with diseased cattle	...	...	...	27	...



# Meteorological Observations, for the year 1891.

MONTH.	Attached Thermometer.	Barometer	TEMPERATURE IN SHADE.							HYGROMETER.		RAINFALL.				DEATH RATE PER 1,000.	
			Maximum.	Minimum.	Mean of Maximum.	Mean of Minimum.	Mean of Month.	Earth.		Dry Bulb.	Wet Bulb.	Amount in Inches.	Greatest Fall in 24 hours.	Date of Greatest Fall.	Days on which over or more rain fell.	All Causes.	Chief Zymotic Diseases.
								1 foot.	4 feet.								
January	42	30.183	50° 8	17° 8	41° 2	30° 4	35° 8	36° 0	41° 9	35° 9	35° 6	3.58	1.27	23rd	13	22.8	0.90
February	44	30.451	61° 0	29° 0	49° 2	34° 1	41° 6	39° 8	42° 3	39° 1	38° 4	0.05	0.03	2nd	2	21.9	0.60
March	43	29.848	57° 8	24° 0	45° 9	35° 8	40° 8	40° 8	42° 4	41° 6	40° 7	1.76	0.31	15th	16	24.0	1.52
April	48	29.964	60° 0	29° 5	52° 5	38° 5	45° 5	46° 2	44° 7	46° 7	44° 8	2.02	0.40	2nd	11	23.1	1.20
May	53	29.790	76° 5	33° 0	59° 0	42° 8	50° 9	52° 2	48° 9	52° 8	49° 7	3.41	0.75	21st	17	25.6	1.10
June	61	30.044	78° 0	43° 5	68° 1	52° 4	60° 2	59° 5	53° 2	62° 0	58° 8	2.47	1.30	24th	12	20.3	1.92
July	62	29.968	77° 0	47° 5	67° 5	53° 0	60° 2	60° 2	56° 6	62° 3	58° 6	2.21	0.36	2nd	17	19.0	1.80
August	60	30.488	69° 4	45° 0	60° 6	52° 3	56° 4	60° 2	57° 3	60° 3	56° 5	7.19	1.10	26th	22	15.3	2.20
September	59	30.006	79° 0	43° 0	62° 1	51° 9	57° 0	58° 5	57° 0	59° 4	56° 4	2.43	0.51	3rd	19	15.7	2.24
October	54	29.694	62° 8	33° 5	51° 3	46° 4	48° 8	52° 3	54° 3	51° 2	49° 0	7.12	1.32	18th	22	21.0	3.30
November	48	29.821	52° 0	29° 0	44° 5	39° 0	41° 7	45° 8	50° 1	43° 3	42° 1	3.91	0.74	28th	15	24.4	2.20
December	45	29.900	55° 8	21° 5	44° 4	36° 5	40° 4	42° 4	46° 7	41° 4	40° 4	6.19	0.78	30th	19	31.3	5.52

646.3 513.1  
53.9 42.8  
42.7 38.3

Mean Temperature of each month in the year as compared with that of the previous five years :—

MONTH.	1886	1887	1888	1889	1890	Mean of 5 years.	1891
January - - -	37°·5	37°·5	38°·4	38°·9	41°·8	38°·8	35°·8
February - - -	35°·6	40°·1	36°·7	39°·1	38°·1	37°·9	41°·6
March - - -	40°·7	39°·1	39°·8	41°·8	45°·1	41°·3	40°·8
April - - -	48°·4	44°·6	44°·6	43°·4	45°·1	45°·2	45°·5
May - - -	53°·1	50°·9	52°·4	55°·3	54°·7	73°·2	50°·9
June - - -	58°·8	61°·0	56°·9	61°·6	57°·7	59°·2	60°·2
July - - -	63°·0	64°·6	58°·1	60°·8	59°·7	61°·2	60°·2
August - - -	62°·9	60°·2	58°·9	59°·5	59°·8	60°·2	56°·4
September - - -	57°·6	51°·7	55°·8	56°·7	59°·8	56°·3	57°·0
October - - -	52°·3	43°·2	48°·6	52°·2	47°·5	48°·7	48°·8
November - - -	45°·0	39°·4	47°·5	46°·2	45°·3	44°·6	41°·7
December - - -	37°·7	38°·2	42°·2	39°·9	35°·3	38°·6	40°·4

The following table illustrates the daily direction of winds throughout the year 1891 :—

Direction of Winds.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for the Year
N. - - -	1	2	....	....	....	....	1	1	1	....	2	....	8
N.E. - - -	12	10	13	13	11	11	9	1	....	3	6	7	96
N.W. - - -	6	10	11	1	4	6	6	8	1	5	6	3	67
N.N.E. - - -	....	....	....	1	....	....	....	....	....	....	....	....	1
N.N.W. - - -	....	....	....	....	....	....	....	....	....	....	....	....	....
S. - - -	4	1	2	4	5	2	5	1	1	4	4	3	36
S.E. - - -	3	2	2	8	5	8	3	....	1	1	2	1	36
S.W. - - -	5	2	3	3	4	3	5	10	9	12	2	8	66
S.S.E. - - -	....	....	....	....	....	....	....	....	....	....	....	....	....
S.S.W. - - -	....	....	....	....	....	....	....	....	....	....	....	....	....
E. - - -	....	....	....	....	1	....	....	....	8	5	4	2	20
W. - - -	....	1	....	....	1	....	2	10	9	1	4	7	35

TABLE SHEWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE FIFTEEN YEARS, 1876-91.

YEAR.	JANUARY.					FEBRUARY.					MARCH.				
	Rain fall in Month. Inches.	Days on which 0·01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rain fall in Month. Inches.	Date on which 0·01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rain fall in Month. Inches.	Days on which 0·01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rain fall in Month. Inches.	Days on which 0·01 or more rain fell.	Greatest fall in 24 hours.
1876	1·91	12	0·68	2nd	5·33	22	0·90	14th	3·92	22	0·54	9th	3·92	22	0·54
1877	5·77	27	0·72	3rd	2·79	20	0·42	11th	2·66	21	0·55	23rd	2·66	21	0·55
1878	1·73	17	0·36	27th	3·07	16	0·87	27th	1·25	8	0·40	28th	1·25	8	0·40
1879	5·95	10	1·30	1st	5·95	23	0·86	20th	1·14	14	0·32	23rd	1·14	14	0·32
1880	0·87	11	0·42	13th	3·88	22	1·06	18th	1·90	12	0·75	2nd	1·90	12	0·75
1881	0·92	12	0·23	26th	4·81	15	1·12	9th	3·88	16	0·68	3rd	3·88	16	0·68
1882	3·19	13	0·82	2nd	2·56	15	0·60	28th	2·26	19	0·32	1st	2·26	19	0·32
1883	5·75	25	1·11	24th	3·73	20	0·65	10th	0·60	10	0·12	19th	0·60	10	0·12
1884	6·03	21	0·99	31st	4·40	22	1·35	17th	3·39	16	1·27	3rd	3·39	16	1·27
1885	3·71	20	0·58	9th	3·65	22	0·67	26th	1·87	16	0·53	29th	1·87	16	0·53
1886	5·03	23	0·91	30th	1·32	11	0·62	28th	3·97	13	0·68	20th	3·97	13	0·68
1887	2·76	15	0·73	7th	1·45	6	0·73	3rd	3·21	10	1·16	15th	3·21	10	1·16
1888	1·70	12	0·49	1st	1·07	9	1·09	2nd	4·62	15	0·76	24th	4·62	15	0·76
1889	1·58	10	0·58	9th	2·00	16	0·64	10th	3·89	16	1·17	8th	3·89	16	1·17
1890	5·21	24	0·61	26th	0·55	7	0·22	19th	1·52	14	0·28	24th	1·52	14	0·28
1891	3·58	13	1·26	23rd	0·05	2	0·03	2nd	1·76	16	0·31	15th	1·76	16	0·31

TABLE SHEWING RAINFALL AT CARDIFF, IN EACH MONTH DURING THE FIFTEEN YEARS, 1876-91.

YEAR.	APRIL.				MAY.				JUNE.			
	Rainfall in Month. Inches.	Days on which 0·01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0·01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0·01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.
1876	1·91	17	0·38	28th	0·23	4	0·12	24th	1·91	9	0·52	15th
1877	2·90	20	0·52	20th	2·47	14	0·99	16th	1·48	12	0·41	1st
1878	4·10	21	0·75	9th	4·32	24	0·71	16th	3·68	15	1·65	16th
1879	2·64	17	0·73	19th	2·85	15	0·88	29th	6·48	23	1·64	30th
1880	1·98	13	0·40	5th	1·45	11	0·46	26th	2·38	19	0·53	17th
1881	1·44	7	0·60	13th	2·62	10	1·73	17th	3·59	18	0·63	16th
1882	5·68	20	0·60	12th	2·72	13	0·59	22nd	4·28	20	0·82	5th
1883	0·67	7	0·28	26th	1·90	12	0·70	11th	1·81	17	1·16	27th
1884	1·56	11	0·43	3rd	2·37	14	0·50	2nd	1·92	9	1·11	28th
1885	2·52	16	0·67	1st	3·86	27	0·71	19th	2·61	13	1·04	23rd
1886	2·98	15	0·73	7th	6·38	19	1·52	31st	0·70	7	0·28	1st
1887	1·63	10	0·45	26th	1·94	14	0·63	19th	0·60	4	0·51	2nd
1888	1·48	13	0·30	17th	1·69	8	0·40	17th	3·69	17	0·74	17th
1889	3·54	18	0·71	30th	2·51	16	0·38	31st	0·58	6	0·41	1st
1890	1·80	14	0·34	6th	1·99	13	0·66	9th	2·46	17	0·40	10th
1891	2·02	11	0·40	2nd	3·41	17	0·75	21st	2·47	12	1·30	24th

TABLE SHEWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE FIFTEEN YEARS, 1876-1891.

YEAR.	JULY.					AUGUST.					SEPTEMBER.			
	Rain fall in Month. Inches.	Days on which fell. 0·01 or more rain	Greatest fall in 24 hours.	Date of greatest fall.	Rain fall in Month. Inches.	Days on which fell. 0·01 or more rain	Greatest fall in 24 hours.	Date of greatest fall.	Rain fall in Month. Inches.	Days on which fell. 0·01 or more rain	Greatest fall in 24 hours.	Date of greatest fall.	Rain fall in Month. Inches.	Days on which fell. 0·01 or more rain
1876	1·91	10	0·41	6th	6·06	27	2·72	19th	7·08	19	1·28	30th		
1877	4·94	18	1·27	14th	5·70	21	1·14	27th	3·25	8	1·39	27th		
1878	2·01	9	0·78	23rd	10·82	24	3·64	15th	3·21	9	1·28	22nd		
1879	4·00	21	0·81	19th	8·12	22	1·34	27th	4·85	17	0·69	7th		
1880	6·64	23	0·95	17th	0·77	7	0·27	2nd	3·67	15	0·77	17th		
1881	2·62	15	0·77	30th	6·94	20	1·45	22nd	2·09	13	0·48	22nd		
1882	5·77	24	0·84	6th	6·75	16	1·14	22nd	3·94	17	0·79	28th		
1883	3·56	21	0·82	20th	2·09	16	0·73	8th	6·14	19	1·53	23rd		
1884	4·05	20	0·94	23rd	2·21	9	0·84	31st	1·96	15	0·64	21st		
1885	0·72	6	0·31	18th	2·74	12	1·07	6th	6·51	23	1·76	10th		
1886	4·85	17	0·71	29th	1·68	9	0·44	9th	4·08	14	0·75	4th		
1887	1·51	13	0·85	26th	2·88	11	1·02	16th	4·07	17	1·24	1st		
1888	6·83	25	1·16	7th	3·50	17	0·74	29th	1·21	8	0·52	27th		
1889	3·85	12	1·16	9th	3·90	15	0·65	2nd	2·09	9	1·53	23rd		
1890	3·57	19	0·73	17th	3·95	20	0·95	9th	1·57	11	0·50	17th		
1891	2·21	17	0·36	2nd	7·19	22	1·10	26th	2·43	19	0·51	3rd		

TABLE SHEWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE FIFTEEN YEARS, 1876-91.

YEAR.	OCTOBER.				NOVEMBER.				DECEMBER.				YEARS.
	Rainfall in Month. Inches.	Days on which rain fell. 0.01 or more	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which rain fell. 0.01 or more	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which rain fell. 0.01 or more	Greatest fall in 24 hours.	Date of greatest fall.	
1876	3.84	17	0.62	16th	5.27	18	0.75	12th	7.13	23	0.80	17th	46.62
1877	4.89	16	1.15	24th	6.54	25	1.06	24th	3.40	25	0.88	28th	46.79
1878	5.76	18	1.09	23rd	5.76	13	0.84	9th	2.70	10	0.75	28th	45.71
1879	1.51	12	0.35	19th	0.43	8	0.18	20th	2.11	9	0.79	31st	44.79
1880	4.94	15	1.45	25th	3.67	15	0.90	15th	6.70	20	1.09	14th	38.85
1881	3.23	13	0.72	22nd	4.98	23	0.65	26th	4.50	15	1.77	7th	41.62
1882	8.33	23	1.64	23rd	6.26	21	0.97	7th	4.86	25	0.73	31st	56.60
1883	4.23	17	0.61	15th	6.38	24	0.80	21st	1.92	17	0.57	10th	38.78
1884	1.01	17	0.35	8th	2.12	16	0.47	30th	5.87	20	0.68	5th	36.89
1885	5.59	22	1.60	22nd	5.47	16	1.11	27th	1.74	17	0.05	5th	40.99
1886	5.09	21	0.87	15th	5.39	21	1.03	5th	6.64	21	1.33	26th	48.11
1887	2.80	13	1.14	29th	3.48	21	0.69	3rd	3.46	20	0.75	12th	29.79
1888	1.74	11	0.52	28th	7.04	26	1.13	12th	3.61	16	0.88	27th	38.18
1889	3.77	25	0.48	8th	1.87	12	0.75	24th	2.40	14	0.80	21st	31.38
1890	1.92	16	0.41	7th	3.89	20	0.67	6th	0.80	4	0.33	18th	29.23
1891	7.12	22	1.32	18th	3.91	15	0.74	28th	6.19	19	0.78	30th	42.34

# DEATHS REGISTERED AT AGES FROM THE SEVERAL CAUSES.

13 Weeks, ending April 4th, 1892.

CAUSES OF DEATH.				DEATHS AT AGES.								Total.	Death-rate per 1,000. Population 121,477.
				Under 1 year.	1 and under 5	5 and under 15	15 and under 25.	25 and under 40.	40 and under 60.	60 and under 80.	80 and upwards.		
(CLASSES.)													
I. Specific Febrile or Zymotic Diseases	...	...	...	12	14	5	3	4	2	...	40	1'31	
II. Parasitic Diseases	...	...	...	1	...	...	...	...	...	...	1	0'03	
III. Dietic	...	...	...	...	...	...	2	1	...	...	3	0'09	
IV. Constitutional	...	...	...	11	19	5	15	65	12	...	127	4'18	
V. Developmental	...	...	...	22	...	...	...	...	30	10	62	2'04	
VI. Local	...	...	...	83	50	14	18	167	107	3	442	14'55	
VII. Violence	...	...	...	2	7	4	5	17	2	...	37	1'21	
VIII. Ill-defined and not specified causes	...	...	...	26	...	...	...	4	4	1	35	1'15	
Total	...	...	...	157	90	28	43	258	157	14	747	24'5	
CLASS I.—Specific Febrile or Zymotic Diseases—													
<i>Miasmatic Diseases.</i>													
Measles	...	...	...	4	3	...	...	...	...	...	7	0'23	
Scarlet Fever	...	...	...	...	1	...	...	...	...	...	1	0'03	
Influenza	...	...	...	...	...	...	...	1	...	...	1	0'03	
Whooping-cough	...	...	...	5	6	3	...	...	...	...	14	0'46	
Diphtheria...	...	...	...	...	2	...	...	1	...	...	3	0'09	
Simple and Ill-defined Fever	...	...	...	...	1	...	...	...	...	...	1	0'03	
Enteric Fever	...	...	...	...	...	2	1	2	1	...	6	0'19	
<i>Diarrhæal Diseases.</i>													
Diarrhœa, Dysentery	...	...	...	1	1	...	...	...	1	...	3	0'09	
<i>Veneral Diseases.</i>													
Syphilis	...	...	...	2	...	...	...	...	...	...	2	0'06	
<i>Septic Diseases.</i>													
Pyæmia, Septicæmia	...	...	...	...	...	...	2	...	...	...	2	0'06	
Total	...	...	...	12	14	5	3	4	2	...	40	1'31	
CLASS II.—Parasitic Diseases.													
Thrush	...	...	...	1	...	...	...	...	...	...	1	0'03	
Total	...	...	...	1	...	...	...	...	...	...	1	0'03	
CLASS III.—Dietic Diseases.													
Intemperance—Chronic Alcoholism	...	...	...	...	...	...	2	1	...	...	3	0'09	
Total	...	...	...	...	...	...	2	1	...	...	3	0'09	
CLASS IV.—Constitutional Diseases.													
Rheumatism	...	...	...	...	1	...	...	3	...	...	4	0'03	
Cancer	...	...	...	...	...	...	...	11	7	...	18	0'59	
Tabes Mesenterica	...	...	...	6	1	...	...	...	...	...	7	0'23	
Tubercular Meningitis (Acute Hydrocephalus)...	...	...	...	2	14	4	2	2	...	...	24	0'79	
Phthisis	...	...	...	1	1	1	11	47	5	...	66	2'17	
Other forms of Tuberculosis, Scrofula	...	...	...	2	2	...	1	1	...	...	6	0'19	
Diabetes Mellitus	...	...	...	...	...	...	1	1	...	...	2	0'06	
Total	...	...	...	11	19	5	15	65	12	...	127	4'18	
CLASS V.—Developmental Diseases.													
Premature Birth	...	...	...	19	...	...	...	...	...	...	19	0'62	
Spina Bifida	...	...	...	1	...	...	...	...	...	...	1	0'03	
Other Congenital Defects	...	...	...	2	...	...	...	...	...	...	2	0'06	
Old Age	...	...	...	...	...	...	...	...	30	10	40	1'31	
Total	...	...	...	22	...	...	...	...	30	10	62	2'04	
CLASS VI.—Local—Diseases of Nervous System.													
Inflammation of Brain or its Membranes	...	...	...	1	...	...	...	...	...	...	1	0'03	
Apoplexy	...	...	...	...	...	...	...	7	3	...	10	0'32	
Paralysis	...	...	...	...	...	...	...	2	...	...	2	0'06	
Softening of Brain	...	...	...	...	...	...	1	1	2	...	4	0'13	
Paralysis, Agitans	...	...	...	1	...	...	...	...	1	...	2	0'06	
Epilepsy	...	...	...	...	...	2	...	2	...	...	4	0'13	
Convulsions	...	...	...	28	5	1	...	...	...	...	34	1'11	
Laryngismus Stridulus	...	...	...	...	...	1	...	...	...	...	1	0'03	
Myelitis	...	...	...	...	...	...	...	1	...	...	1	0'03	
Paraplegia, Diseases of Spinal Cord	...	...	...	...	...	...	...	1	...	...	1	0'03	
Other Diseases of Nervous System	...	...	...	...	...	1	...	1	1	...	3	0'09	

DEATHS REGISTERED AT AGES FROM THE SEVERAL CAUSES—Continued.

CAUSES OF DEATH.				DEATHS AT AGES.								Total.	Death-rate per 1,000. population 121,477.
				Under 1 year.	1 and under 5.	5 and under 15	15 and under 25	25 and under 35.	35 and under 45.	45 and under 60.	60 and under 80.		
CLASS VI.—3—Diseases of Circulatory System.													
Endocarditis, Valvular Disease				...	...	2	6	28	22	1	59	1'94	
Pericarditis				...	...	1	...	...	...	...	1	0'03	
Angini Pectoris				...	...	...	...	1	...	...	1	0'03	
Syncope				...	...	...	...	3	1	...	4	0'13	
Aneurism				...	...	...	...	2	...	...	2	0'06	
4—Diseases of Respiratory System.													
Laryngitis...				...	1	...	...	1	1	...	3	0'09	
Emphysema, Asthma				...	...	1	...	1	1	...	3	0'09	
Bronchitis...				23	22	1	2	23	39	2	112	3'68	
Pneumonia				16	18	3	4	63	27	...	131	4'31	
Pleurisy				...	1	...	3	3	...	...	7	0'23	
5—Diseases of Digestive System.													
Dentition				4	1	...	...	...	...	...	5	0'16	
Hæmatemesis				...	...	...	...	1	1	...	2	0'06	
Melæna				...	...	...	...	...	1	...	1	0'03	
Diseases of Stomach				...	...	...	1	...	...	...	1	0'03	
Gastritis				1	1	...	...	1	...	...	3	0'09	
Enteritis				5	...	...	...	1	1	...	7	0'23	
Ileus, Obstruction of Intestine				...	...	...	...	1	...	...	1	0'03	
Stricture, or Strangulation of Intestine				...	...	...	...	3	...	...	3	0'09	
Hernia				...	...	...	...	1	...	...	1	0'03	
Peritonitis				2	...	...	...	1	...	...	3	0'09	
Cirrhosis of Liver				...	...	...	...	3	1	...	4	0'13	
Other Diseases of Liver				...	...	...	...	2	...	...	2	0'06	
7—Diseases of Urinary System.													
Acute Nephritis				...	...	...	...	...	1	...	1	0'03	
Bright's Disease				...	...	1	...	6	1	...	8	0'26	
Suppression of Urine				1	...	...	...	...	...	...	1	0'03	
Disease of Bladder and of Prostate				...	...	...	...	...	1	...	1	0'03	
8—Diseases of Organs of Generation.													
Metritis				...	...	...	...	...	...	...	...	...	
Ovarian Disease				...	...	...	...	1	...	...	1	0'03	
Pelvic Abscess				...	...	...	...	1	...	...	1	0'03	
Perineal Abscess				...	...	...	...	...	1	...	1	0'03	
9—Diseases of Parturition.													
Childbirth				...	...	...	...	3	...	...	3	0'09	
Other Accidents of Childbirth				...	...	...	1	...	...	...	1	0'03	
10—Diseases of Organs of Locomotion													
Caries, Necrosis				...	...	...	...	1	...	...	1	0'03	
Arthritis, Ostitis, Periostitis...				...	1	...	...	1	...	...	2	0'06	
Other Diseases of Organs of Locomotion				...	...	...	...	...	1	...	1	0'03	
11—Diseases of Integumentary System.													
Eczema				1	...	...	...	...	...	...	1	0'03	
Total				83	50	14	18	167	107	3	442	14'55	
CLASS VII.—Violence—Accident or Negligence.													
Fractures, Contusions				...	1	2	3	14	1	...	21	0'69	
Burn, Scald				...	6	2	...	...	...	...	8	0'26	
Drowning				...	...	...	2	1	1	...	4	0'13	
Suffocation				2	...	...	...	...	...	...	2	0'06	
Suicide.				...	...	...	...	...	...	...	...	...	
Poison				...	...	...	...	1	...	...	1	0'03	
Otherwise				...	...	...	...	1	...	...	1	0'03	
Total				2	7	4	5	17	2	...	37	1'21	
CLASS VIII.—Ill-defined and not Specified Causes.													
Dropsy				...	...	...	...	...	1	...	1	0'03	
Debility, Atrophy, Inanition				21	...	...	...	4	...	...	25	0'82	
Abscess				1	...	...	...	...	...	...	1	0'03	
Hæmorrhage				...	...	...	...	1	...	...	1	0'03	
Sudden (cause unascertained)				3	...	...	...	2	...	...	5	0'16	
Other ill-defined and not specified				1	...	...	...	1	...	...	2	0'06	
Total				26	...	...	...	4	4	1	35	1'15	



# DEATHS REGISTERED AT AGES FROM THE SEVERAL CAUSES.

13 Weeks, ending July 4th, 1891.

CAUSES OF DEATH.					DEATHS AT AGES.								Total.	Death-rate per 1,000.  Population 124,477.
					Under 1 year.	1 and under 5	5 and under 15	15 and under 25.	25 and under 60.	60 and under 80.	80 and upwards.			
(CLASSES.)														
I.	Specific Febrile or Zymotic Diseases	...	...	...	24	21	6	4	35	5	...	95	2·91	
II.	Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	
III.	Dietic	...	...	...	...	...	...	...	5	...	...	5	0·15	
IV.	Constitutional	...	...	...	12	7	8	20	69	12	...	128	3·92	
V.	Developmental	...	...	...	23	...	...	...	1	11	10	45	1·38	
VI.	Local	...	...	...	67	39	12	23	158	84	6	389	11·9	
VII.	Violence	...	...	...	3	3	3	6	21	3	1	40	1·22	
VIII.	Ill-defined and not specified causes	...	...	...	22	2	1	...	10	4	...	39	1·19	
Total					151	72	30	53	299	119	17	741	22·7	
CLASS I.—Specific Febrile or Zymotic Diseases.—														
<i>Miasmatic Diseases.</i>														
	Measles	...	...	...	1	4	...	...	...	...	...	5	0·15	
	Scarlet Fever	...	...	...	...	2	...	...	...	...	...	2	0·06	
	Influenza	...	...	...	4	...	...	1	26	4	...	35	1·07	
	Whooping-cough	...	...	...	9	12	1	...	1	...	...	23	0·70	
	Diphtheria	...	...	...	...	2	4	...	...	...	...	6	0·18	
	Enteric Fever	...	...	...	...	...	1	3	2	...	...	6	0·18	
	Other Miasmatic Diseases	...	...	...	...	...	...	...	1	...	...	1	0·03	
<i>Diarrhoeal Diseases.</i>														
	Diarrhoea, Dysentery	...	...	...	3	...	...	...	2	...	...	5	0·15	
<i>Veneral Diseases.</i>														
	Syphilis	...	...	...	5	...	...	...	...	...	...	5	0·15	
<i>Septic Diseases.</i>														
	Erysipelas	...	...	...	1	...	...	...	2	1	...	4	0·12	
	Pyæmia, Septicæmia	...	...	...	1	1	...	...	1	...	...	3	0·09	
Total					24	21	6	4	35	5	...	95	2·91	
CLASS III.—Dietic Diseases.														
	Intemperance	{	Chronic Alcoholism	...	...	...	...	...	4	...	...	4	0·12	
		{	Delirium Tremens	...	...	...	...	...	1	...	...	1	0·03	
Total					...	...	...	...	5	...	...	5	0·15	
CLASS IV.—Constitutional Diseases.														
	Rheumatic Fever, Rheumatism of Heart	...	...	...	...	...	2	...	1	...	...	3	0·09	
	Gout	...	...	...	...	...	...	...	1	...	...	1	0·03	
	Cancer	...	...	...	...	...	1	...	17	5	...	23	0·70	
	Tabes Mesenterica	...	...	...	5	...	...	...	...	...	...	5	0·15	
	Tubercular Meningitis (Acute Hydrocephalus)	...	...	...	5	5	3	1	...	...	...	14	0·42	
	Phthisis	...	...	...	1	1	1	17	46	7	...	73	2·24	
	Other Forms of Tuberculosis, Scrofula	...	...	...	1	1	1	2	1	...	...	6	0·18	
	Anæmia, Chlorosis, Leucocythæmia	...	...	...	...	...	...	...	1	...	...	1	0·03	
	Diabetes Mellitus	...	...	...	...	...	...	...	2	...	...	2	0·06	
Total					12	7	8	20	69	12	...	128	3·92	
CLASS V.—Developmental Diseases.														
	Premature Birth	...	...	...	19	...	...	...	...	...	...	19	0·58	
	Spina Bifida	...	...	...	1	...	...	...	...	...	...	1	0·03	
	Other Congenital Defects	...	...	...	3	...	...	...	...	...	...	3	0·09	
	Old Age	...	...	...	...	...	...	...	1	11	10	22	0·67	
Total					23	...	...	...	1	11	10	45	1·38	
CLASS VI.—Local—Diseases of Nervous System.														
	Inflammation of Brain or its Membranes	...	...	...	...	...	1	...	...	...	...	1	0·03	
	Apoplexy	...	...	...	...	...	...	...	7	5	...	12	0·36	
	Paralysis	...	...	...	...	...	...	...	1	2	...	3	0·09	
	Softening of Brain	...	...	...	...	...	...	...	...	4	...	4	0·12	
	Hemiplegia, Brain Paralysis...	...	...	...	...	...	...	...	1	1	...	2	0·06	
	Paralysis, Agitans	...	...	...	...	...	...	...	1	...	...	1	0·03	
	Epilepsy	...	...	...	...	1	...	1	2	...	...	4	0·12	
	Convulsions	...	...	...	26	10	2	...	...	...	...	38	1·16	
	Laryngismus Stridulus	...	...	...	1	...	...	...	...	...	...	1	0·03	
	Paraplegia, Diseases of Spinal Cord	...	...	...	...	1	...	...	1	...	...	2	0·06	
	Other Diseases of Nervous System	...	...	...	...	...	...	...	1	...	...	1	0·03	
<i>Diseases of Circulatory System.</i>														
	Endocarditis, Valvular Disease	...	...	...	...	...	...	4	18	18	1	41	1·25	
	Pericarditis	...	...	...	...	1	...	...	...	...	...	1	0·03	

# DEATHS REGISTERED AT AGES FROM THE SEVERAL CAUSES—Continued.

CAUSES OF DEATH.	DEATHS AT AGES.								Total.	Death-rate per 1,000.
	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 50.	50 and under 60.	60 and under 80.	80 and upwards.		Population 121,477.
Syncope ... ..	...	...	...	2	3	1	...	...	6	0.18
Aneurism ... ..	...	...	...	...	...	1	...	...	1	0.03
Senile Gangrene ... ..	...	...	...	...	...	1	...	...	1	0.03
Other Diseases of Circulatory System	...	...	...	...	1	...	...	...	1	0.03
<i>Diseases of Respiratory System.</i>										
Laryngitis ... ..	1	2	...	1	4	1	...	...	9	0.27
Croup ... ..	...	1	1	...	...	...	...	...	2	0.06
Other Diseases of Larynx and Trachea	...	...	1	...	...	...	...	...	1	0.03
Emphysema, Asthma ... ..	...	...	...	...	1	...	...	...	1	0.03
Bronchitis ... ..	19	10	2	1	18	18	4	...	72	2.21
Pneumonia ... ..	10	10	2	8	73	21	1	...	125	3.83
Pleurisy ... ..	...	...	1	...	3	3	...	...	7	0.21
<i>Diseases of Digestive System.</i>										
Dentition ... ..	4	1	...	...	...	...	...	...	5	0.15
Gastritis ... ..	1	...	...	...	...	1	...	...	2	0.06
Enteritis ... ..	4	...	...	...	...	...	...	...	4	0.12
Stricture, or Strangulation of Intestine	...	1	...	...	2	2	...	...	5	0.15
Intussusception of Intestine ... ..	...	...	...	1	...	...	...	...	1	0.03
Peritonitis ... ..	...	...	1	...	...	...	...	...	1	0.03
Jaundice ... ..	...	1	...	...	...	...	...	...	1	0.03
Hepatitis ... ..	...	...	...	...	1	...	...	...	1	0.03
Cirrhosis of Liver ... ..	...	...	...	1	3	...	...	...	4	0.12
Other Diseases of Liver ... ..	...	...	...	...	...	2	...	...	2	0.03
<i>Diseases of Urinary System.</i>										
Bright's Disease ... ..	...	...	1	1	11	2	...	...	15	0.46
Hæmaturia ... ..	...	...	...	...	...	1	...	...	1	0.03
Disease of Bladder and of Prostate	...	...	...	...	...	1	...	...	1	0.03
<i>Diseases of Parturition.</i>										
Childbirth ... ..	...	...	...	2	2	...	...	...	4	0.12
Puerperal Convulsions ... ..	...	...	...	1	1	...	...	...	2	0.06
<i>Diseases of Organs of Locomotion.</i>										
Caries, Necrosis ... ..	...	...	...	...	1	...	...	...	1	0.03
Arthritis, Ostitis, Periostitis ... ..	1	...	...	...	...	...	...	...	1	0.03
<i>Diseases of Integumentary System.</i>										
Ulcer, Bed sore ... ..	...	...	...	...	1	...	...	...	1	0.03
Total ... ..	67	39	12	23	158	84	6	389	11.9	
<b>CLASS VII.—Violence—Accident or Negligence.</b>										
Fractures, Contusions ... ..	...	1	1	3	10	2	1	...	18	0.55
Burn, Scald ... ..	...	2	...	1	1	...	...	...	4	0.12
Drowning ... ..	1	...	1	2	7	...	...	...	11	0.33
Suffocation ... ..	2	...	1	...	...	...	...	...	3	0.09
<i>Homicide.</i>										
Murder, Manslaughter ... ..	...	...	...	...	1	...	...	...	1	0.03
<i>Suicide.</i>										
Cut, Stab ... ..	...	...	...	...	1	...	...	...	1	0.03
Hanging ... ..	...	...	...	...	...	1	...	...	1	0.03
Otherwise ... ..	...	...	...	...	1	...	...	...	1	0.03
Total ... ..	3	3	3	6	21	3	1	40	1.22	
<b>CLASS VIII.—Ill-defined and not Specified Causes.</b>										
Debility, Atrophy, Inanition ... ..	17	1	1	...	7	1	...	...	27	0.82
Hæmorrhage ... ..	1	...	...	...	2	3	...	...	6	0.18
Sudden (Cause unascertained) ... ..	3	...	...	...	...	...	...	...	3	0.09
Other ill-defined and not specified ... ..	1	1	...	...	1	...	...	...	3	0.09
Total ... ..	22	2	1	...	10	4	...	39	1.19	

# DEATHS REGISTERED AT AGES FROM THE SEVERAL CAUSES.

13 Weeks, ending October 3rd, 1891.

CAUSES OF DEATH.				DEATHS AT AGES.							Total.	Death-rate per 1,000 Population 181,477.
				Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 35.	35 and under 45.	45 and under 60.		
(CLASSES.)												
I.	Specific Febrile or Zymotic Diseases	...	...	43	15	8	5	12	5	...	88	2'70
II.	Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	..
III.	Dietic	...	...	...	...	...	...	1	3	...	4	0'12
IV.	Constitutional	...	...	10	16	6	14	50	10	...	106	3'25
V.	Developmental	...	...	13	...	...	...	...	7	6	26	0'79
VI.	Local	...	...	50	24	4	11	91	43	2	225	6'90
VII.	Violence	...	...	4	2	4	7	23	5	...	45	1'38
VIII.	Ill-defined and not specified causes	...	...	28	3	1	...	10	3	1	46	1'40
Total				148	60	23	38	189	73	9	540	16'5
CLASS I.—Specific Febrile or Zymotic Diseases—												
<i>Miasmatic Diseases.</i>												
	Measles	...	...	3	5	1	...	...	...	...	9	0'27
	Scarlet Fever	...	...	...	1	4	...	...	...	...	5	0'15
	Influenza	...	...	5	...	1	1	3	2	...	12	0'36
	Whooping-cough	...	...	12	6	...	...	...	...	...	18	0'55
	Diphtheria	...	...	...	1	1	...	...	...	...	2	0'06
	Enteric Fever	...	...	...	...	1	3	3	...	...	7	0'21
<i>Diarrhoeal Diseases.</i>												
	Diarrhoea, Dysentery	...	...	23	2	...	...	...	2	...	27	0'82
<i>Malarial Diseases.</i>												
	Remittent Fever	...	...	...	...	...	1	...	...	...	1	0'03
<i>Venereal Diseases.</i>												
	Syphilis	...	...	...	...	...	...	2	...	...	2	0'06
	Gonorrhoea, Stricture of Urethra	...	...	...	...	...	...	2	...	...	2	0'06
<i>Septic Diseases.</i>												
	Erysipelas	...	...	...	...	...	...	...	1	...	1	0'03
	Pyæmia, Septicæmia	...	...	...	...	...	...	2	...	...	2	0'06
Total				43	15	8	5	12	5	...	88	2'70
CLASS II.—Parasitic Diseases.												
	Thrush	...	...	...	...	...	...	...	...	...	...	...
CLASS III.—Dietic Diseases.												
	Intemperance.	Chronic Alcoholism	...	...	...	...	1	3	...	...	5	0'12
Total				...	...	...	1	3	...	...	4	0'12
CLASS IV.—Constitutional Diseases.												
	Rheumatic Fever, Rheumatism of Heart	...	...	...	...	1	...	...	...	...	1	0'03
	Rheumatism	...	...	...	...	...	...	3	...	...	3	0'09
	Rickets	...	...	...	1	...	...	...	...	...	1	0'03
	Cancer	...	...	...	1	...	...	13	8	...	22	0'67
	Tabes Mesenterica	...	...	3	4	...	...	...	...	...	7	0'21
	Tubercular Meningitis (Acute Hydrocephalus)	...	...	4	6	3	1	...	...	...	14	0'42
	Phthisis	...	...	1	1	2	13	31	2	...	50	1'53
	Other Forms of Tuberculosis, Scrofula	...	...	2	3	...	...	1	...	...	6	0'18
	Anæmia, Chlorosis, Leucocythæmia	...	...	...	...	...	...	2	...	...	2	0'06
Total				10	16	6	14	50	10	...	106	3'25
CLASS V.—Developmental Diseases.												
	Premature Birth	...	...	11	...	...	...	...	...	...	11	0'33
	Cyanosis	...	...	1	...	...	...	...	...	...	1	0'03
	Cleft Palate, Harelip	...	...	1	...	...	...	...	...	...	1	0'03
	Old Age	...	...	...	...	...	...	...	7	6	13	0'39
Total				13	...	...	...	...	7	6	26	0'79
CLASS VI.—Local—Diseases of Nervous System.												
	Apoplexy	...	...	...	...	...	...	1	2	...	3	0'09
	Paralysis	...	...	...	...	...	...	1	3	...	4	0'12
	Hemiplegia, Brain Paralysis	...	...	...	...	...	1	...	1	...	2	0'06
	Paralysis, Agitans	...	...	...	...	...	...	2	1	...	3	0'09
	Epilepsy	...	...	1	...	...	...	2	...	...	3	0'09
	Convulsions	...	...	16	3	1	1	...	...	...	21	0'64
	Laryngismus Stridulus	...	...	1	...	...	...	...	...	...	1	0'03
	Paraplegia, Diseases of Spinal Cord	...	...	...	2	...	...	2	...	...	4	0'12

# DEATHS REGISTERED AT AGES FROM THE SEVERAL CAUSES—Continued.

CAUSES OF DEATH.				DEATHS AT AGES.							Total.	Death-rate per 1,000	
				Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and under 80.	80 and upwards.		Population 130,483.	
<b>CLASS VI.—3—Diseases of Circulatory System.</b>													
Endocarditis, Valvular Disease	...	...	...	...	...	...	1	28	9	1	39	1'19	
Aneurism	...	...	...	...	...	...	...	...	...	1	1	0'03	
<b>4—Diseases of Respiratory System.</b>													
Laryngitis	...	...	...	...	1	1	...	2	...	...	4	0'12	
Croup	...	...	...	...	2	...	...	...	...	...	2	0'06	
Other Diseases of Larynx and Trachea	...	...	...	...	...	...	...	1	2	...	3	0'09	
Bronchitis	...	...	...	10	7	...	...	8	10	...	35	1'07	
Pneumonia	...	...	...	9	7	1	1	22	3	...	43	1'32	
Pleurisy	...	...	...	...	1	...	1	1	...	...	3	0'09	
<b>5—Diseases of Digestive System.</b>													
Dentition	...	...	...	4	...	...	...	...	...	...	4	0'12	
Diseases of Stomach	...	...	...	...	...	...	...	1	...	...	1	0'03	
Gastritis	...	...	...	...	...	...	...	2	...	...	2	0'06	
Enteritis	...	...	...	5	...	...	...	3	...	...	8	0'24	
Ileus, Obstruction of Intestine	...	...	...	1	...	...	...	1	...	...	2	0'06	
Stricture or Strangulation of Intestine	...	...	...	...	...	...	...	...	1	...	1	0'03	
Peritonitis	...	...	...	...	...	...	1	3	...	...	4	0'12	
Jaundice	...	...	...	1	...	...	...	1	1	...	3	0'09	
Cirrhosis of Liver	...	...	...	1	...	...	...	1	2	...	4	0'12	
Other Diseases of Liver	...	...	...	...	...	...	1	1	1	...	3	0'09	
<b>7—Diseases of Urinary System.</b>													
Acute Nephritis	...	...	...	...	1	...	...	...	...	...	1	0'03	
Bright's Disease	...	...	...	...	...	1	1	6	2	...	10	0'30	
Suppression of the Urine	...	...	...	...	...	...	...	...	1	...	1	0'03	
Hæmaturia	...	...	...	...	...	...	...	...	1	...	1	0'03	
Disease of Bladder and of Prostate	...	...	...	...	...	...	...	...	1	...	1	0'03	
<b>8—Diseases of Organs of Generation.</b>													
Pelvic Abscess	...	...	...	...	...	...	...	...	1	...	1	0'03	
<b>9—Diseases of Parturition.</b>													
Childbirth	...	...	...	1	...	...	1	1	...	...	3	0'09	
Puerperal Mania	...	...	...	...	...	...	1	...	...	...	1	0'03	
Puerperal Convulsions	...	...	...	...	...	...	...	1	...	...	1	0'03	
<b>10—Diseases of Organs of Locomotion</b>													
Arthritis, Ostitis, Periostitis	...	...	...	...	...	...	1	...	1	...	2	0'06	
Total	...	...	...	50	24	4	11	91	43	2	225	6'90	
<b>CLASS VII.—Violence—Accident or Negligence.</b>													
Fractures, Contusions	...	...	...	1	...	2	3	7	3	...	16	0'49	
Cut, Stab	...	...	...	...	1	...	...	1	...	...	2	0'06	
Burn, Scald	...	...	...	1	1	...	...	...	1	...	3	0'09	
Drowning	...	...	...	...	...	2	3	4	1	...	10	0'30	
Suffocation	...	...	...	...	...	...	...	5	...	...	5	0'15	
Otherwise	...	...	...	2	...	...	...	2	...	...	4	0'12	
<b>Suicide.</b>													
Otherwise	...	...	...	...	...	...	1	4	...	...	5	0'15	
Total	...	...	...	4	2	4	7	23	5	...	45	1'38	
<b>CLASS VIII.—Ill-defined and not Specified Causes.</b>													
Debility, Atrophy, Inanition	...	...	...	28	2	1	...	...	1	...	32	0'98	
Mortification	...	...	...	...	...	...	...	...	...	1	1	0'03	
Tumour	...	...	...	...	...	...	...	1	1	...	2	0'06	
Abscess	...	...	...	...	1	...	...	3	...	...	4	0'12	
Hæmorrhage	...	...	...	...	...	...	...	5	1	...	6	0'18	
Other ill-defined and not specified	...	...	...	...	...	...	...	1	...	...	1	0'03	
Total	...	...	...	28	3	1	...	10	3	1	46	1'40	

# DEATHS REGISTERED AT AGES FROM THE SEVERAL CAUSES.

13 Weeks, ending January 2nd, 1892.

CAUSES OF DEATH.					DEATHS AT AGES.								Total.	Death-rate per 1,000.	
					Under 1 year.	1 and under 5.	5 and under 15	15 and under 25	25 and under 50.	50 and under 80.	80 and upwards	Population 130,283.			
(CLASSES.)															
I.	Specific Febrile or Zymotic Diseases	...	...	...	48	65	20	6	16	9	...	164	5.03		
II.	Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...		
III.	Dietic	...	...	...	...	...	...	...	2	...	...	2	0.06		
IV.	Constitutional	...	...	...	15	21	8	9	45	15	1	114	3.50		
V.	Developmental	...	...	...	21	...	...	...	...	11	13	45	1.38		
VI.	Local	...	...	...	124	49	16	12	130	92	6	429	13.17		
VII.	Violence	...	...	...	4	2	3	3	18	...	...	30	0.92		
VIII.	Ill-defined and not specified causes	...	...	...	26	8	3	2	16	6	...	61	1.87		
Total					238	145	50	32	227	133	20	845	25.9		
CLASS I.—I.—Specific Febrile or Zymotic Diseases.															
<i>Miasmatic Diseases.</i>															
	Chickenpox	...	...	...	2	...	...	...	...	...	...	2	0.06		
	Measles	...	...	...	6	26	1	...	...	1	...	34	1.04		
	Scarlet Fever	...	...	...	...	14	10	1	2	...	...	27	0.82		
	Influenza	...	...	...	7	2	2	3	9	7	...	30	0.92		
	Whooping-cough	...	...	...	13	18	3	...	...	...	...	34	1.04		
	Diphtheria...	...	...	...	...	3	2	...	...	...	...	5	0.15		
	Enteric Fever	...	...	...	...	...	2	1	4	...	...	7	0.21		
<i>Diarrheal Diseases.</i>															
	Diarrhoea, Dysentery	...	...	...	15	1	...	...	...	1	...	17	0.52		
<i>Venereal Diseases.</i>															
	Syphilis	...	...	...	5	1	...	...	...	...	...	6	0.18		
<i>Septic Diseases.</i>															
	Erysipelas	...	...	...	...	...	...	1	1	...	...	2	0.06		
Total					48	65	20	6	16	9	...	164	5.03		
CLASS III.—Dietic Diseases.															
	Intemperance—Chronic Alcoholism	...	...	...	...	...	...	...	2	...	...	2	0.06		
Total					...	...	...	...	2	...	...	2	0.06		
CLASS IV.—Constitutional Diseases.															
	Rheumatic Fever, Rheumatism of Heart	...	...	...	...	1	2	1	1	...	...	5	0.15		
	Rheumatism	...	...	...	...	...	1	...	1	...	...	2	0.06		
	Rickets	...	...	...	1	...	...	...	...	...	...	1	0.03		
	Cancer	...	...	...	...	...	...	...	7	8	1	16	0.49		
	Tabes Mesenterica	...	...	...	3	2	...	...	...	...	...	5	0.15		
	Tubercular Meningitis (Acute Hydrocephalus)...	...	...	...	8	10	3	1	1	...	...	23	0.70		
	Phthisis	...	...	...	1	4	1	6	35	3	...	50	1.53		
	Other forms of Tuberculosis, Scrofula	...	...	...	2	3	...	...	...	2	...	7	0.21		
	Anæmia, Chlorosis Leucocythemia	...	...	...	...	1	1	1	...	...	...	3	0.09		
	Diabetes Mellitus	...	...	...	...	...	...	...	...	2	...	3	0.06		
Total					15	21	8	9	45	15	1	114	3.50		
CLASS V.—Developmental Diseases.															
	Premature Birth	...	...	...	18	...	...	...	...	...	...	18	0.55		
	Spina Bifida	...	...	...	1	...	...	...	...	...	...	1	0.03		
	Other Congenital Defects	...	...	...	2	...	...	...	...	...	...	2	0.06		
	Old Age	...	...	...	...	...	...	...	...	11	13	24	0.73		
Total					21	...	...	...	...	11	13	45	1.38		
CLASS VI.—Local—Diseases of Nervous System.															
	Apoplexy	...	...	...	...	...	...	...	5	2	1	8	0.03		
	Paralysis	...	...	...	...	...	...	...	3	2	...	5	0.15		
	Softening of Brain	...	...	...	...	...	...	...	...	2	...	2	0.06		
	Hemiplegia, Brain Paralysis	...	...	...	1	...	...	...	3	1	...	5	0.15		
	Paralysis, Agitans	...	...	...	...	...	...	...	...	1	...	1	0.03		
	Convulsions	...	...	...	25	2	...	...	1	...	...	28	0.85		
	Laryngismus Stridulus	...	...	...	...	1	...	...	...	...	...	1	0.03		
	Paraplegia, Diseases of Spinal Cord	...	...	...	1	...	...	...	...	1	...	2	0.06		
	Other Diseases of Nervous System	...	...	...	...	1	...	...	...	...	...	1	0.03		

DEATHS REGISTERED AT AGES FROM THE SEVERAL CAUSES—Continued.

CAUSES OF DEATH.	DEATHS AT AGES.							Total.	Death-rate per 1,000. Population 130,483.
	Under 1 year.	1 and under 4.	5 and under 14.	15 and under 24.	25 and under 60.	60 and under 80.	80 and upwards.		
<i>Diseases of Organs of Special Sense.</i>									
Ophthalmia and Dis. of Eye ...	...	...	1	...	...	...	...	1	0'03
<i>Diseases of Circulatory System.</i>									
Endocarditis, Valvular Disease ...	...	...	1	4	26	18	3	52	1'59
Pericarditis ...	...	...	1	...	...	...	...	1	0'03
Syncope ...	...	...	...	...	4	3	...	7	0'21
Aneurism ...	...	...	...	...	...	1	...	2	0'03
<i>Diseases of Respiratory System.</i>									
Croup ...	1	5	1	...	...	...	...	7	0'21
Other Diseases of Larynx and Trachea ...	...	...	1	...	...	...	...	1	0'03
Emphysema, Asthma ...	...	...	...	...	5	...	...	5	0'15
Bronchitis ...	51	16	...	1	24	39	2	133	4'08
Pneumonia ...	22	17	4	3	23	15	...	84	2'57
Pleurisy ...	...	1	...	...	3	2	...	6	0'18
<i>Diseases of Digestive System.</i>									
Dentition ...	4	4	...	...	...	...	...	8	0'24
Hæmatemesis ...	1	...	...	...	...	...	...	1	0'03
Gastritis ...	5	...	1	...	...	...	...	6	0'18
Enteritis ...	9	...	...	...	...	...	...	9	0'27
Ileus, Obstruction of Intestine ...	...	...	...	...	2	...	...	2	0'06
Hernia ...	...	...	...	...	1	...	...	1	0'03
Fistula ...	...	...	...	...	1	...	...	1	0'03
Peritonitis ...	...	...	4	2	...	...	...	6	0'18
Jaundice ...	2	...	...	...	...	...	...	2	0'06
Hepatitis ...	...	...	...	...	...	1	...	1	0'03
Cirrhosis of Liver ...	...	...	...	...	6	1	...	7	0'21
<i>Diseases of Urinary System.</i>									
Acute Nephritis ...	1	...	...	1	2	1	...	5	0'15
Bright's Disease ...	...	...	1	...	11	1	...	13	0'39
<i>Diseases of Parturition.</i>									
Childbirth ...	...	...	...	...	5	...	...	5	0'15
Abortion, Miscarriage ...	...	...	...	...	1	...	...	1	0'03
Puerperal Convulsions ...	...	...	...	...	1	...	...	1	0'03
<i>Diseases of Organs of Locomotion.</i>									
Caries, Necrosis ...	...	1	1	1	...	...	...	3	0'09
Arthritis, Ostitis, Periostitis ...	...	1	...	...	1	...	...	3	0'09
<i>Diseases of Integumentary System.</i>									
Carbuncle ...	...	...	...	...	1	...	...	1	0'03
Phlegmon, Cellulitis ...	...	...	...	...	1	...	...	1	0'03
Ulcer, Bedsore ...	...	...	...	...	...	1	...	1	0'03
Total ...	124	49	16	12	130	92	6	429	13'17
<b>CLASS VII.—Violence—Accident or Negligence.</b>									
Fractures, Contusions ...	...	...	1	...	6	...	...	7	0'21
Burn, Scald ...	...	1	1	1	2	...	...	5	0'15
Drowning ...	...	...	1	1	1	...	...	3	0'09
Suffocation ...	4	1	...	1	1	...	...	7	0'21
Otherwise ...	...	...	...	...	4	...	...	4	0'12
<i>Suicide.</i>									
Otherwise ...	...	...	...	...	4	...	...	4	0'12
Total ...	4	2	3	3	18	...	...	30	0'92
<b>CLASS VIII.—Ill-defined and not Specified Causes.</b>									
Dropsy ...	...	...	1	...	1	...	...	2	0'06
Debility, Atrophy, Inanition ...	22	8	1	...	4	3	...	38	1'16
Tumour ...	...	...	1	2	6	...	...	9	0'27
Abscess ...	1	...	...	...	2	...	...	3	0'09
Hæmorrhage ...	...	...	...	...	3	3	...	6	0'18
Sudden (Cause unascertained) ...	1	...	...	...	...	...	...	1	0'03
Other ill-defined and not specified ...	2	...	...	...	...	...	...	2	0'09
Total ...	26	8	3	2	16	4	...	61	1'87

# DEATHS REGISTERED AT AGES FROM THE SEVERAL CAUSES.

Year 1891.

CAUSES OF DEATH.					DEATHS AT AGES.							Total.	Death-rate per 1,000	
					Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and under 80.	80 and upwards.		Population 130,283.	
(CLASSES.)														
I.	Specific Febrile or Zymotic Diseases	...	...	...	127	115	39	18	67	21	...	387	2'970	
II.	Parasitic Diseases	...	...	...	1	...	...	...	...	...	...	1	0'007	
III.	Dietic	...	...	...	...	...	...	3	11	...	...	14	0'107	
IV.	Constitutional	...	...	...	48	63	27	58	229	49	1	475	3'645	
V.	Developmental	...	...	...	79	...	...	...	1	59	39	178	1'366	
VI.	Local	...	...	...	324	162	46	64	546	326	17	1485	11'398	
VII.	Violence	...	...	...	13	14	14	21	79	10	1	152	1'166	
VIII.	Ill-defined and not specified causes	...	...	...	102	13	5	2	40	17	2	181	1'389	
Total					694	367	131	166	973	482	60	2873	22'051	
CLASS I.—Miasmatic Diseases.														
	Chickenpox	...	...	...	2	...	...	...	...	...	...	2	0'014	
	Measles	...	...	...	14	38	2	...	...	1	...	55	0'422	
	Scarlet Fever	...	...	...	...	18	14	1	2	...	...	35	0'268	
	Influenza	...	...	...	16	2	3	5	39	13	...	78	0'598	
	Whooping-cough	...	...	...	39	42	7	...	1	...	...	89	0'683	
	Diphtheria	...	...	...	...	8	7	...	1	...	...	16	0'122	
	Simple and ill-defined Fever	...	...	...	...	1	...	...	...	...	...	1	0'007	
	Enteric Fever	...	...	...	...	...	6	8	11	1	...	26	0'199	
	Other Miasmatic Diseases	...	...	...	...	...	...	...	1	...	...	1	0'007	
Diarrhoeal Diseases.														
	Diarrhoea Dysentery	...	...	...	42	4	...	...	2	4	...	52	0'399	
Malarial Diseases.														
	Remittent Fever	...	...	...	...	...	...	1	...	...	...	1	0'007	
Venereal Diseases.														
	Syphilis	...	...	...	12	1	...	...	2	...	...	15	0'115	
	Gonorrhoea, Stricture of Urethra	...	...	...	...	...	...	...	2	...	...	2	0'014	
Septic Diseases.														
	Phagedæna	...	...	...	1	...	...	1	3	2	...	7	0'053	
	Erysipelas	...	...	...	1	1	...	2	3	...	...	7	0'053	
Total					127	115	39	18	67	21	...	387	2'970	
CLASS II.—Parasitic Diseases.														
	Thrush	...	...	...	1	...	...	...	...	...	...	1	0'007	
Total					1	...	...	...	...	...	...	1	0'007	
CLASS III.—Dietic Diseases.														
	Intemperance	{ Chronic Alcoholism	...	...	...	...	...	3	10	...	...	13	0'099	
		{ Delirium Tremens	...	...	...	...	...	...	1	...	...	1	0'007	
Total					...	...	...	3	11	...	...	14	0'107	
CLASS IV.—Constitutional Diseases.														
	Rheumatic Fever, Rheumatism of Heart	...	...	...	...	1	5	1	2	...	...	9	0'069	
	Rheumatism	...	...	...	...	1	1	...	7	...	...	9	0'069	
	Gout	...	...	...	...	...	...	...	1	...	...	1	0'007	
	Rickets	...	...	...	1	1	...	...	...	...	...	2	0'014	
	Cancer	...	...	...	...	1	1	...	48	28	1	79	0'606	
	Tabes Mesenterica	...	...	...	17	7	...	...	...	...	...	24	0'184	
	Tubercular Meningitis (Acute Hydrocephalus)	...	...	...	19	35	13	5	3	...	...	75	0'575	
	Phthisis	...	...	...	4	7	5	47	159	17	...	239	1'834	
	Other Forms of Tuberculosis, Scrofula	...	...	...	7	9	1	3	3	2	...	25	0'191	
	Anæmia, Chlorosis, Leucocythæmia	...	...	...	...	1	1	1	3	...	...	6	0'046	
	Diabetes Mellitus	...	...	...	...	...	...	1	3	2	...	6	0'046	
Total					48	63	27	58	229	49	1	475	3'645	
CLASS V.—Developmental Diseases.														
	Premature Birth	...	...	...	67	...	...	...	...	...	...	67	0'514	
	Cyanosis	...	...	...	1	...	...	...	...	...	...	1	0'007	
	Spina Bifida	...	...	...	3	...	...	...	...	...	...	3	0'023	
	Cleft Palate, Harelip	...	...	...	1	...	...	...	...	...	...	1	0'007	
	Other Congenital Defects	...	...	...	7	...	...	...	...	...	...	7	0'053	
	Old Age	...	...	...	...	...	...	...	1	59	39	99	0'759	
Total					79	...	...	...	1	59	39	178	1'366	

## DEATHS REGISTERED AT AGES FROM THE SEVERAL CAUSES—Continued.

CAUSES OF DEATH.	DEATHS AT AGES.								Total.	Death-rate per 1,000. population 130,285.
	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 40.	40 and under 60.	60 and under 80.	80 and upwards.		
<b>CLASS VI.—Diseases of Nervous System.</b>										
Inflammation of Brain or its Membranes	...	1	...	1	...	...	...	...	2	0'014
Apoplexy	...	...	...	...	20	12	1	...	33	0'253
Paralysis	...	...	...	...	7	7	...	...	14	0'107
Softening of Brain	...	...	...	1	1	8	...	...	10	0'076
Hemiplegia, Brain Paralysis	...	1	...	1	4	3	...	...	9	0'069
Paralysis, Agitans	...	1	...	...	3	3	...	...	7	0'053
Epilepsy	...	1	2	1	6	...	...	...	11	0'084
Convulsions	95	20	4	1	1	...	...	...	121	0'928
Laryngismus Stridulus	2	1	1	...	...	...	...	...	4	0'030
Myelitis	...	...	...	...	1	...	...	...	1	0'007
Paraplegia, Diseases of Spinal Cord	1	3	...	...	4	1	...	...	9	0'069
Other Diseases of Nervous System	...	1	1	...	2	1	...	...	5	0'038
<b>Diseases of Organs of Special Sense.</b>										
Ophthalmia and Dis. of Eye...	...	...	1	...	...	...	...	...	1	0'007
<b>Diseases of Circulatory System.</b>										
Endocarditis, Valvular Disease	...	...	3	15	100	67	6	191	1'466	
Pericarditis	...	1	2	...	...	...	...	...	3	0'023
Angina Pectoris	...	...	...	...	1	...	...	...	1	0'007
Syncope	...	...	...	2	10	5	...	...	17	0'130
Aneurism	...	...	...	...	2	2	1	...	5	0'038
Senile Gangrene	...	...	...	...	...	1	...	...	1	0'007
Other Diseases of Circulatory System	...	...	...	...	1	...	...	...	1	0'007
<b>Diseases of Respiratory System.</b>										
Laryngitis...	1	4	1	1	7	2	...	...	16	0'122
Croup	1	8	2	...	...	...	...	...	11	0'084
Other Diseases of Larynx and Trachea	...	...	2	...	1	2	...	...	5	0'038
Emphysema, Asthma	...	...	1	...	7	1	...	...	9	0'069
Bronchitis...	103	55	3	4	73	106	8	352	2'701	
Pneumonia	57	52	10	16	181	66	1	383	2'939	
Pleurisy	...	3	1	4	10	5	...	...	23	0'176
<b>Diseases of Digestive System.</b>										
Dentition	16	6	...	...	...	...	...	...	22	0'168
Hæmatemesis	1	...	...	...	1	1	...	...	3	0'023
Melæna	...	...	...	...	...	1	...	...	1	0'007
Diseases of Stomach	...	...	...	1	1	...	...	...	2	0'014
Gastritis	7	1	1	...	3	1	...	...	13	0'099
Enteritis	23	...	...	...	4	1	...	...	28	0'214
Ileus, Obstruction of Intestine	1	...	...	...	4	...	...	...	5	0'038
Stricture, or Strangulation of Intestine	...	1	...	...	5	3	...	...	9	0'069
Intussusception of Intestine	...	...	...	1	...	...	...	...	1	0'007
Hernia	...	...	...	...	2	...	...	...	2	0'014
Fistula	...	...	...	...	1	...	...	...	1	0'007
Peritonitis...	2	...	5	3	4	...	...	...	14	0'107
Jaundice	3	1	...	...	1	1	...	...	6	0'046
Hepatitis	...	...	...	...	1	1	...	...	2	0'014
Cirrhosis of Liver	1	...	...	1	13	4	...	...	19	0'145
Other Diseases of Liver	...	...	...	1	3	3	...	...	7	0'053
<b>Diseases of Urinary System.</b>										
Acute Nephritis	1	1	...	1	2	2	...	...	7	0'053
Bright's Disease	...	...	4	2	34	6	...	...	46	0'353
Suppression of Urine	1	...	...	...	...	1	...	...	2	0'014
Hæmaturia	...	...	...	...	1	1	...	...	2	0'014
Disease of Bladder and of Prostate	...	...	...	...	...	3	...	...	3	0'023
<b>Diseases of Organs of Generation.</b>										
Ovarian Disease	...	...	...	...	1	...	...	...	1	0'007
Pelvic Abscess	...	...	...	...	1	1	...	...	2	0'014
Perineal Abscess	...	...	...	...	...	1	...	...	1	0'007
<b>Diseases of Parturition.</b>										
Childbirth	1	...	...	3	11	...	...	...	15	0'115
Abortion, Miscarriage	...	...	...	...	1	...	...	...	1	0'007
Puerperal Mania	...	...	...	...	1	...	...	...	1	0'007
Puerperal Convulsions	...	...	...	1	3	...	...	...	4	0'030
Other Accidents of Childbirth	...	...	...	...	1	...	...	...	1	0'007
<b>Diseases of Organs of Locomotion.</b>										
Caries, Necrosis	...	1	1	1	2	...	...	...	5	0'038
Arthritis, Ostitis, Periostitis	2	2	...	1	2	1	...	...	8	0'061
Other Diseases of Organs of Locomotion	...	...	...	...	...	1	...	...	1	0'007



## DEATHS REGISTERED AT AGES FROM THE SEVERAL CAUSES—Continued.

CAUSES OF DEATH.	DEATHS AT AGES.								Total.	Death-rate per 1,000.  Population 130,483.
	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and under 70.	70 and under 80.	80 and upwards.		
<i>Diseases of Integumentary System.</i>										
Carbuncle ... ..	...	...	...	...	1	...	...	...	1	0'007
Phlegmon, Cellulitis ... ..	...	...	...	...	1	...	...	...	1	0'007
Ulcer, Bedsore ... ..	...	...	...	...	1	1	...	...	2	0'014
Eczema ... ..	1	...	...	...	...	...	...	...	1	0'007
Total ... ..	324	162	46	64	546	336	17	1485	11'398	
<b>CLASS VII.—<i>Violence, Accident or Negligence.</i></b>										
Fractures, Contusions ... ..	1	2	6	9	37	6	1	62	0'475	
Cut, Stab ... ..	...	1	...	...	1	...	...	2	0'014	
Burn, Scald ... ..	1	10	3	2	3	1	...	20	0'153	
Drowning ... ..	1	...	4	8	13	2	...	28	0'214	
Suffocation ... ..	8	1	1	1	6	...	...	17	0'128	
Otherwise ... ..	2	...	...	...	6	...	...	8	0'061	
<i>Homicide.</i>										
Murder, Manslaughter ... ..	...	...	...	...	1	...	...	1	0'007	
<i>Suicide.</i>										
Cut, Stab ... ..	...	...	...	...	1	...	...	1	0'007	
Poison ... ..	...	...	...	...	1	...	...	1	0'007	
Hanging ... ..	...	...	...	...	...	1	...	1	0'007	
Otherwise ... ..	...	...	...	1	10	...	...	11	0'084	
Total ... ..	13	14	14	21	59	10	1	152	1'166	
<b>CLASS VIII.—<i>Ill-defined and not Specified Causes.</i></b>										
Dropsy ... ..	...	...	1	...	1	...	1	3	0'023	
Debility, Atrophy, Inanition... ..	88	11	3	...	11	9	...	122	0'936	
Mortification ... ..	...	...	...	...	...	...	1	1	0'007	
Tumour ... ..	...	...	1	2	7	1	...	11	0'084	
Abscess ... ..	2	1	...	...	5	...	...	8	0'061	
Hæmorrhage ... ..	1	...	...	...	11	7	...	19	0'145	
Sudden (Cause unascertained) ... ..	7	...	...	...	...	...	...	9	0'069	
Other ill-defined and not specified ... ..	4	1	...	...	3	...	...	8	0'061	
Total ... ..	102	13	5	2	40	17	2	181	1'389	



TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH, DURING THE YEAR 1891, IN THE URBAN SANITARY DISTRICT OF CARDIFF, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES.

[illegible]